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THE AMERICAN RACE:

A LINGUISTIC CLASSIFICATION AND ETHNOGRAPHIC
DESCRIPTION OF THE NATIVE TRIBES OF
NORTH AND SOUTH AMERICA.

BY

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DANIEL G. BRINTON.

1891.

TO THE
 CONGRÈS INTERNATIONAL DES AMÉRICANISTES,
 AN ASSOCIATION
 WHOSE BROAD SYMPATHIES AND ENLIGHTENED SPIRIT
 ILLUSTRATE THE NOBLEST ASPECTS OF SCIENCE,
 AND WHOSE EXCELLENT WORK IN
 AMERICAN ETHNOGRAPHY, ARCHÆOLOGY, AND EARLY HISTORY
 HAS CREATED A DEEP AND ABIDING INTEREST IN
 THESE STUDIES THROUGHOUT EUROPE,
 THIS WORK
 IS RESPECTFULLY DEDICATED
 BY THE
 AUTHOR.

PREFACE.

SO far as I know, this is the first attempt at a systematic classification of the whole American race on the basis of language. I do not overlook Dr. Latham's meritorious effort nearly forty years ago; but the deficiency of material at that time obliged him to depart from the linguistic scheme and accept other guides.

While not depreciating the value of physical data, of culture and traditional history, I have constantly placed these subordinate to relationship as indicated by grammar and lexicography. There are well-known examples in the ethnography of other races, where reliance on language alone would lead the investigator astray; but all serious students of the native American tribes are united in the opinion that with them no other clue can compare to it in general results. Consequently the Bureau of Ethnology of the United States and the similar departments in the governments of Canada and Mexico have agreed in adopting officially the linguistic classification for the aboriginal population within their several territories.

Wherever the material permitted it, I have ranked the grammatic structure of a language superior to its lexical elements in deciding upon relationship. In this I follow the precepts and example of students of the Aryan and Semitic stocks; although their methods have been rejected by some who have written on American tongues. As for myself, I am abidingly convinced that the morphology of any language whatever is its most permanent and characteristic feature.

It has been my effort to pay especial attention to those portions of the continent whose ethnography remains obscure. The publications of official bodies, as well as those of numerous societies and individuals, have cleared up most of the difficulties in that portion of the continent north of Mexico; hence it is to the remainder that I have given greater space. The subject, however, is so vast, and the material so abundant, that I fear the reader may be disappointed by the brevity of the descriptions I have allowed to the several stocks.

The outlines of the classification and the general arrangement of the material are those which for several years I have adopted in my lecture courses before the Academy of Natural Sciences, Philadelphia. In fact, this volume may properly be regarded as an expansion of the ninth lecture—that on “The American Race,”—in my lectures on gen-

eral ethnography, published last year under the title "Races and Peoples."

In defining the locations of the various tribes, I have encountered many difficulties from their frequent removals. As a rule I have assigned a tribe the location where it was first encountered and identified by the white explorers; though sometimes I have preferred some later location where its activity was longest known.

The great variety of the orthography of tribal names has led me to follow the rule of selecting that which is locally the most usual. This variety has been not a little increased by what seems to me the pedantry of many learned writers, who insist on spelling every native name they mention according to some phonetic system of their own devising—thus adding to the already lamentable orthographic confusion.

I have not thought it advisable to adopt terminations to designate stocks as distinguished from tribes. The Bureau of Ethnology has adopted for stocks the termination *an*, as "Algonkian," "Siouian." This frequently gives terms of strange appearance, and is open to some other objections. It would be desirable to have this question of terminology decided by the International Congress of Americanists, on some plan applicable to French, German and Spanish, as well as English, rather

than to have it left to a local body or a single authority.

My thanks are due Mr. H. W. Henshaw, editor of the *American Anthropologist*, for revising the list of North Pacific Coast Stocks, and various suggestions.

I regret that I have not been able to avail myself of the unpublished material in the Bureau of Ethnology at Washington; but access to this was denied me except under the condition that I should not use in any published work the information thus obtained; a proviso scarcely so liberal as I had expected.

Philadelphia, February, 1891.

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THE AMERICAN RACE.

INTRODUCTORY.

RACIAL HISTORY AND CHARACTERISTICS.

THE differentiation of the species Man into various races, with permanent traits and inhabiting definite areas, took place early in the present geologic epoch. Of these races there are four which are well-marked, each developed in one of the continental areas as they existed at the time referred to. They are the Eurafrican or white, the Austafrican or black, the Asian or yellow, and the American or red race. The color-names given them are merely approximations, and are retained for the sake of convenience, and as expressing a general and obvious characteristic.*

The American race was that which was found occupying the whole of the New World when it first

*For the full development of these principles, I would refer the reader to my work entitled *Races and Peoples; Lectures on the Science of Ethnography* (N. D. C. Hodges, New York, 1890).

became revealed to Europeans. Its members are popularly known as "Indians," or "American Indians," because Columbus thought that the western islands which he discovered were part of India; and his error has been perpetuated in the usually received appellation of its inhabitants. To the ethnographer, however, they are the only "Americans," and their race is the "American Race."

When investigation proved that the continent was not a part of Asia, but a vast independent land-area surrounded by wide oceans, the learned began to puzzle themselves with the problem of the origin of its inhabitants. The Hebrew myths of the creation of man and of a universal deluge in which the whole species perished except a few in Western Asia, for a long time controlled the direction of such speculations. The wildest as well as the most diverse hypotheses were brought forward and defended with great display of erudition. One of the most curious was that which advanced the notion that the Americans were the descendants of the ten "lost tribes of Israel." No one, at present, would acknowledge himself a believer in this theory; but it has not proved useless, as we owe to it the publication of several most valuable works.*

Another equally vain dream was that of "the lost Atlantis," a great island or land-connection which was imagined to have existed within recent times between Northern Africa and South America. A reminiscence of it was supposed to have survived in a

* Notably, Adair's *History of the North American Indians*, and Lord Kingsborough's magnificent *Mexican Antiquities*.

story of the Egyptian priests preserved by Plato, that beyond the Pillars of Hercules was a great island which had since sunk in the sea. The account may have referred to the Canary Islands, but certainly not to any land-bridge across the Atlantic to the American Continent. Such did exist, indeed, but far back in the Eocene period of the Tertiary, long before man appeared on the scene. The wide difference between the existing flora and fauna of Africa and South America proves that there has been no connection in the lifetime of the present species.*

Scarcely less incredible are the theories which still have some distinguished advocates, that the continent was peopled from Polynesia, or directly from Japan or China. Several laborious works have been compiled with reference to "Fu Sang," a land referred to as east of China, and identified by these writers with Mexico. A distinguished ethnologist has recently published a map showing the courses by which he supposes the Japanese arrived in America.†

It is not impossible that in recent centuries some junks may have drifted on the Northwest coast. But their crews would undoubtedly have been promptly slaughtered; and it is only in later ages that the Chinese or Japanese constructed such junks. The theory, therefore, offers no solution to the problem.

* For a complete refutation of this venerable hypothesis see an article "L'Atlantide," by Charles Ploix, in the *Revue d'Anthropologie*, 1887, p. 291; and de Mortillet, *Le Préhistorique Antiquité de l'Homme*, p. 124.

† De Quatrefages, *Histoire Generale des Races Humaines*, p. 558. He adds the wholly incorrect statement that many Japanese words are found in American languages.

Still less does that in reference to the Polynesians. They had no such craft as junks, and though bold navigators, were wholly unprepared to survive so long a voyage as from the nearest of the islands of Oceanica to the coast of America. Moreover, we have satisfactory proof that the eastern islands of Polynesia were peopled from the western islands at a recent date, that is, within two thousand years.

Probably the favorite theory at the present day is that the first inhabitants of the New World came from northeastern Asia, either by the Aleutian islands or across Behring Strait. Concerning the Aleutian islands we know by the evidence of language and archæology that they were first peopled from America, and not from Asia. Moreover, they are separated one from the other in places by hundreds of miles of a peculiarly stormy and dangerous sea.*

It is otherwise with Behring Straits. From East Cape in Siberia one can see the American shore, and when first explored the tribes on each side were in frequent communication. No doubt this had been going on for a long time, and thus they had influenced each other in blood and culture. But so long as we have any knowledge of the movings at this point, they have been *from* America into Asia, the Eskimos pushing their settlements along the Asian coast. It will be replied that we should look to a period an-

*The nearest of the Aleutian islands to Kamschatka is 253 miles distant. The explorer Behring found the western Aleutians, those nearest the Asian shore, uninhabited. See W. H. Dall, "Origin of the Inuit," pp. 96, 97, in *Contributions to North American Ethnology*, Vol. I. (Washington, 1877.)

terior to the Eskimos. Any migration at that remote epoch is refuted by other considerations. We know that Siberia was not peopled till late in Neolithic times, and what is more, that the vicinity of the strait and the whole coast of Alaska were, till a very modern geologic period, covered by enormous glaciers which would have prevented any communication between the two continents.* These considerations reduce any possible migrations at this point to such as may have taken place long after America, both North and South, possessed a wide-spread population.

The question which should be posed as preliminary to all such speculations is, *When* did man first appear on this isolated continent?

To answer this we must study its later geological history, the events which have occurred since the close of the Tertiary, that is, during the Quaternary age.

In North and also in South America that age was characterized by one notable event, which impressed its presence by lasting memorials on the surface of the continent. This was the formation of a series of enormous glaciers, covering the soil of nearly half the temperate zones with a mass of ice thousands of feet in thickness. The period of its presence is called the Great Ice Age or the Glacial Epoch. Beyond the immediate limits of the ice it may not have been a season of extreme cold, for glaciers form more rapidly when the temperature is not much below the

*The evidences of a vast ice-sheet once covering the whole of East Cape are plainly visible. See Dr. I. C. Rosse, *Medical and Anthropological Notes on Alaska*, p. 29. (Washington, 1883.)

freezing point. Nor was it continuous. The ice sheet receded once, if not twice, causing an "interglacial" epoch, when the climate was comparatively mild. After this interim it seems to have advanced again with renewed might, and to have extended its crystalline walls down to about the fortieth parallel of latitude, touching the Atlantic near Boston and New York harbors, and stretching nearly across the continent in an irregular line, generally a little north of the Ohio and a little south of the Missouri rivers. Enormous ice masses covered the Pacific Slope as far south as the mouth of the Columbia river, and extended over 1200 miles along the coast, submerging the whole of Queen Charlotte and Vancouver islands and the neighboring coast of British Columbia, which at that time were depressed about two hundred feet below the present level. The ice also covered for four hundred miles or more the plateau or Great Basin between the Rocky Mountains and the Coast Range, rising in some places in a solid mass five or six thousand feet above the soil.*

The melting of this second glacial inroad began at the east, and on the Pacific coast has not yet ceased. Its margin across the continent is still distinctly defined by a long line of debris piled up in "moraines," and by a fringe of gravel and sand called the "overwash," carried from these by the mighty floods which accompanied the great thaw. This period of melting

*Joseph Prestwich, *Geology*, Vol. II, p. 465 (Oxford, 1888). J. D. Dana, *Text Book of Geology*, pp. 355-359 (New York, 1883). Geo. M. Dawson, in *The American Geologist*, 1890, p. 153. The last mentioned gives an excellent epitome of the history of the great Pacific glacier.

is the "Post-glacial Era." It was accompanied by extensive changes in the land-levels and in temperature.

In the glacial and early post-glacial periods, the northern regions of the continent and the bottom of the Northern Atlantic were considerably above their present levels; but in the late post-glacial or "Champlain" period the land had sunk so much that at Lake Champlain it was five hundred feet lower than now, and at New York Harbor ten feet lower. The St. Lawrence river was then an arm of the sea, Lake Champlain was a deep bay, and the mouth of the Delaware river was where the city of Trenton now stands, the river itself being a wide inlet.*

The climate, which in the early post-glacial period had been so cold that the reindeer enjoyed an agreeable home as far south as Kentucky, changed to such mildness that two species of elephants, the giant sloth and the peccary, found congenial pasturage in the Upper Ohio and Delaware Valleys.†

The interest which this piece of geologic history has for us in this connection is the presence of man in America during all the time that these tremendous events were taking place. We know he was there, from the evidence he has left behind him in the various strata and deposits attributable to the different agencies I have described. How far back his most ancient relics carry us, is not quite clear. By some, the stone implements from Table Mountain, Califor-

*James D. Dana, loc. cit., p. 359.

†James D. Dana, "Reindeers in Southern New England," in *American Journal of Science*, 1875, p. 353.

nia, and a skull found in the auriferous gravel in Calaveras county, California, are claimed to antedate any relics east of the mountains. These stone utensils are, however, too perfect, they speak for a too specialized condition of the arts, to be attributable to a primitive condition of man; and as for the Calaveras skull, the record of its discovery is too unsatisfactory. Furthermore, in a volcanic country such as the Pacific coast, phenomena of elevation and subsidence occur with rapidity, and do not offer the same evidence of antiquity as in more stable lands.

This is an important point, and applies to a series of archæological discoveries which have been announced from time to time from the Pacific coast. Thus, in Nicaragua, human foot-prints have been found in compact tufa at a depth of twenty-one feet beneath the surface soil, and overlaid by repeated later volcanic deposits. But a careful examination of all their surroundings, especially of the organic remains at a yet greater depth, leads inevitably to the conclusion that these foot-prints cannot be ascribed to any very remote antiquity.* The singular changes in the Pacific seaboard are again illustrated along the coast of Ecuador and Peru. For some sixty miles north and south near the mouth of the Esmeraldas river there is a deposit of marine clay six or eight feet thick underlying the surface soil in a continuous stratum. Under this again is a horizon of sand and loam containing rude stone implements, and what is

*See "On an ancient Human Footprint from Nicaragua," by D. G. Brinton, in *Proceedings of the American Philosophical Society*, 1887, p. 437.

significant, fragments of rough pottery and gold ornaments.* This shows conclusively that an extensive and prolonged subsidence took place in that locality not only after man reached there, but after he had developed the important art of the manufacture of clay vessels. This was certainly not at the beginning of his appearance on the scene; and the theory of any vast antiquity for such relics is not tenable.

The lowest, that is, the oldest, deposit on the eastern coast in which any relics of human industry are claimed to have been found, is that known as the "Columbian gravel." This is considered by geologists to have been formed in the height of the first glacial period. From its undisturbed layers have been exhumed stones bearing the marks of rough shaping, so as to serve the purpose of rude primitive weapons.†

During the first or main Interglacial Period was deposited the "modified drift." In a terrace of this material on the Mississippi, near Little Falls, Minnesota, Miss Babbitt found numerous quartz chips regarded by competent archæologists as artificial products.‡ They represent the refuse of an early workshop near the quartz veins in that vicinity, and

* J. S. Wilson, in *Memoirs of the Anthropological Society of London*, Vol. III., p. 163.

† The finders have been Messrs. H. P. Cresson and W. H. Holmes. From my own examination of them, I think there is room for doubt as to the artificial origin of some of them. Others are clearly due to design.

‡ Her account is in the *American Naturalist*, 1884, p. 594, and a later synopsis in *Proceedings of the American Association for the Advancement of Science*, 1889, p. 333.

were cast aside by the pristine implement-maker when the Minnesota glacier was receding for the last time, but still lifted its icy walls five or ten miles above the present site of Little Falls.

The extensive beds of loess which cover many thousand square miles in the Central United States are referred to the second Glacial Epoch. Professor Aughey reports the finding of rudely chipped arrow-head in this loess as it occurs in the Missouri Valley. They lay immediately beneath the vertebra of an elephant, an animal, I need scarcely add, long since extinct. Another proof of man's presence about that date is a primitive hearth discovered in digging a well along the old beach of Lake Ontario. According to that competent geologist, Professor Gilbert, this dated from a period when the northern shore of that body of water was the sheer wall of a mighty glacier, and the channel of the Niagara river had not yet begun to be furrowed out of the rock by the receding waters.* Other finds which must be referred to about this epoch are those by McGee of a chipped obsidian implement in the lacustrine marls of western Nevada; and that of a fragment of a human skull in the westernmost extension of the loess in Colorado.†

More conclusive than these are the repeated discoveries of implements, chipped from hard stones, in deposits of loess and gravels in Ohio and Indiana, which deposits, without doubt, represent a closing episode of the last Glacial Epoch. There may be

* G. K. Gilbert, in *The American Anthropologist*, 1889, p. 173.

† W. J. McGee, "Palæolithic Man in America," in *Popular Science Monthly*, November 1888.

some question about the geologic age of the former finds, but about these there is none. They prove beyond cavil that during the closing scenes of the Quaternary in North America, man, tool-making, fire-using man, was present and active.* This decision is not only confirmed, but greatly extended, by the researches of Dr. C. C. Abbott and others in the gravels about Trenton, on the Delaware. These were laid down contemporaneously with the terminal moraine in Ohio and Indiana, from which the palæoliths were exhumed. Abbott's discoveries include several hundred stone implements of the true palæolithic or "Chelléen" type, and some fragments of human skeletons.† They reveal to us not only the presence of man, but a well defined stage of culture strictly comparable to that of the "river drift" men of the Thames and the Somme in western Europe, which has been so ably described by De Mortillet.‡

Such discoveries have not been confined to the northern portion of the continent. Barcena reported the relics of man in a quarternary rock in the valley of Mexico.|| The geologists of the Argentine Republic describe others which must be referred to a very remote age. The writers who have given the most

* See G. Frederick Wright, *The Ice Age in North America*.

† Dr. Abbott has reported his discoveries in numerous articles, and especially in his work entitled *Primitive Industry*, chapters 32, 33.

‡ De Mortillet, *Le Préhistorique Antiquité de l'Homme*, p. 132, sq.

|| Mariano de la Barcena, "Fossil Man in Mexico," in the *American Naturalist*, Aug., 1885.

information about them are Ameghino and Burmeister. They found bone and stone implements of rude form and the remains of hearths associated with bones of the extinct horse, the glyptodon, and other animals now unknown. The stratigraphic relations of the finds connected them with the deposits of the receding Austral glacier.*

Such facts of these place it beyond doubt that man lived in both North and South America at the close of the Glacial Age. It is not certain that this close was synchronous in both the northern and southern hemispheres, nor that the American glacier was contemporary with the Ice Age of Europe. The able geologist, Mr. Croll, is of opinion that if there was a difference in time, the Ice Age of America was posterior to that of Europe. In any case, the extreme antiquity of man in America is placed beyond cavil. He was here long before either northern Asia or the Polynesian islands were inhabited, as it is well known they were first populated in Neolithic times.

The question naturally arises, did he not originate upon this continent? The answer to this is given by Charles Darwin in his magistral statement—"Our progenitors diverged from the catarrhine stock of the anthropoids; and the fact that they belonged to this stock clearly shows that they inhabited the Old World."† In fact, all the American monkeys,

* Florentino Ameghino, *La Antigüedad del Hombre en el Plata*, passim. (2 vols, Buenos Aires, 1880.)

† *The Descent of Man*, p. 155. Dr. Rudolph Hoernes, however, has recently argued that the discovery of such simian forms in the American tertiary as the *Anaptomorphus homunculus*, Cope,

whether living or fossil, are platyrrhine, have thirty-four teeth, and have tails, characteristics which show that none of the higher anthropoids lived in the New World.

We are obliged, therefore, to look for the original home of the American glacial man elsewhere than in America. Some interesting geological facts throw an unexpected light upon our investigations. I have already remarked that in the various recent oscillations of the earth's crust, there occurred about the middle and later Glacial Epoch an uplift of the northern part of the continent and also of the northern Atlantic basin. In the opinion of Professor James Geikie this amounted to a vertical elevation of three thousand feet above the present level, and resulted in establishing a continuous land connection between the higher latitudes of the two continents, *which remained until the Post-glacial Period*.^{*} Dr. Habenicht also recognizes this condition of affairs and places it during the "old stone" age in Europe,[†] which corresponds to the position assigned it by McGee.

Very recently, Professor Spencer has summed up

renders it probable that the anthropoid ancestor of man lived in North America. *Mittheil der Anthropol. Gesell. in Wien*, 1890, § 71. The Anaptomorphus was a lemur rather than a monkey, and had a dentition very human in character.

^{*}Quoted by G. F. Wright in *The Ice Age in America*, p. 583.

[†]H. Habenicht, *Die Recenten Veränderungen der Erdoberfläche*, s. 27 (Gotha, 1882). He further shows that at that time both northern Russia and northern Siberia were under water, which would effectually dispose of any assumed migration by way of the latter.

the evidence in favor of the elevation of the northern portions of America and the north Atlantic, about the early Pliocene times, and considers that it proves beyond a doubt that it must have reached from 2000 to 3000 feet above the present level.*

Further testimony to the existence of this land bridge is offered by the glacial striæ on the rocks of Shetland, the Faroe islands, Iceland and south Greenland. These are in such directions and of such a character that Mr. James Croll, a high authority, maintains that they must have been produced by *land ice*, and that the theory of a land connection between these localities "can alone explain all the facts."† A comparison of the flora and fauna in the higher latitudes of the two continents reveals marked identities which require some such theory to explain them. Thus, certain species of land snails occur both in Labrador and Europe, and the flora of Greenland, although American in the north, is distinctly European in the south.‡

Again, in certain very late Pliocene formations in England, known as the Norwich crag and the red crag of Suffolk, "no less than eighteen species of American mollusca occur, only seven of which still live on the Scandinavian coast, the remainder being confined to North America." In consequence of

* J. W. Spencer, in the *London Geological Magazine*, 1890, p. 208, sqq.

† James Croll, *Climate and Time*, p. 451.

‡ G. F. Wright, *The Ice Age in North America*, pp. 582-3 (New York, 1890). De Mortillet, *Le Préhistorique*, etc., pp. 186-7. H. Rink, in *Proc. of the Amer. Philos. Society*, 1885, p. 293.

such facts the most careful English geologists of to-day hold that the land communication, which certainly existed between Europe and North America in Eocene times by way of Iceland and Greenland, which was then a part of the American continent, continued to exist through the Miocene and Pliocene Epochs. This land bridge formed a barrier of separation between the Arctic and Atlantic oceans, so that the temperature of the higher latitudes was much milder than at present.*

The evidence, therefore, is cumulative that at the close of the last Glacial Epoch, and for an indeterminate time previous, the comparatively shallow bed of the north Atlantic was above water; and this was about the time that we find men in the same stage of culture dwelling on both its shores.

The attempt has often been made by geologists to calculate the remoteness in time of the close of the Ice Age, and of these vestiges of human occupation. The chronometers appealed to are the erosion of river valleys, especially of the gorge of Niagara, the filling of lake beds, the accumulation of modern detritus, etc. Professor Frederick Wright, who has studied the problem of the Niagara gorge with especial care, considers that a minimum period of twelve thousand years must have elapsed since its

* In his excellent work, *The Building of the British Isles*, (London, 1888), Mr. A. J. Jukes-Browne presents in detail the proofs of these statements, and gives two plates (Nos. XII. and XIII.), showing the outlines of this land connection at the period referred to (pp. 252, 257, etc.).

erosion began.* But as Professor Gilbert justly remarks, whatever the age of the great cataract may be, the antiquity of man in America is far greater, and reaches into a past for which we have found no time-measure.†

The same may be said for Europe. De Quatrefages and many other students of the subject consider that the evidence is sufficient to establish the presence of man near the Atlantic coast in the Pliocene Epoch; and excellent English geologists have claimed that the caves in the valley of the River Clwyd, in north Wales, whose floors contain flint implements, had their entrance blocked by true glacial deposits, so that man was there present before the Great Ice Age began.

From this brief presentation of the geologic evidence, the conclusion seems forced upon us that the ancestors of the American race could have come from no other quarter than western Europe, or that portion of Eurafica which in my lectures on general ethnography I have described as the most probable location of the birth-place of the species.‡

* Wright, *The Ice Age*, p. 504.

† Gilbert, *Sixth An. Rep. of the Com. of the N. Y. State Reservation*, p. 84 (Albany, 1890).

‡ *Races and Peoples*, chapter III. (New York, 1890).

Scheme of the Age of Man in America.

AGE.	PERIOD.	GEOLOGICAL CHARACTERS.	HUMAN RELICS.
Quaternary or Pleistocene.	1. Pre-glacial.	Auriferous gravels of California (?). Lower lake beds in Great Basin. Attenuated drift. Columbia formation. Sinking of Atlantic Coast.	Calaveras skull (?). Palæoliths from Claymont, Del.
	2. First glacial.	Old glacial drift in Mississippi Valley. Brick clays. Modified drift of Minnesota.	Flint chips and rude implements.
	3. Inter-glacial.	Medial Gravels in Great Basin. Pampas formation.	Bone and stone implements.
	4. Second glacial.	New glacial drift and till, fiords. Moraines of Ohio Valley. Loess of central United States. British America and N. Atlantic elevated. Trenton gravels.	Palæolithic implements from the moraines. Palæolithic implements from Trenton.
	5. Post glacial.	Completion of Great Lakes. Elevation of North Atlantic subsiding. Reindeer in Ohio Valley. Climate cold. Lacustrine deposits. Seaboard deposits.	Brachycephalic skulls from Trenton. Hearth on former shore of L. Ontario. Skulls of Pontimelo and Rio Negro, S.A. Argillite implements. Earliest kitchen-middens.
	1. Champlain or Fluvial.	Land below present level. Climate mild. Elephant, mastodon ohioiticus, megatherium, giant bison, horse (all now extinct).	Limonite bones in Florida. Lagoa Santa bones in Brazil.
	2. Present or Alluvial.	River deposits. Formation of forest loam.	Quartz and jasper implements. Pottery. Later shell heaps. Ohio mounds. Relics of existing or known tribes.

Many difficulties present themselves in bringing these periods into correspondence with the seasons of the Quaternary in Europe; but after a careful study of both continents, Mr. W. J. McGee suggests the following synchronisms:*

*North America.**Western Europe.*

Inter-glacial period	Époque chelléenne.
Early second glacial period	Époque moustérienne.
Middle (mild) second glacial period	Époque solutréenne.
Close of second glacial period and post-glacial	Époque magdalénienne.
Champlain period	Kitchen-middens and époque Robenhausienne.

Of course it would not be correct to suppose that the earliest inhabitants of the continent presented the physical traits which mark the race to-day. Racial peculiarities are slowly developed in certain "areas of characterization," but once fixed are indelible. Can we discover the whereabouts of the area which impressed upon primitive American man—an immigrant, as we have learned, from another hemisphere—those corporeal changes which set him over against his fellows as an independent race?

I believe that it was in the north temperate zone. It is there we find the oldest signs of man's residence on the continent; it is and was geographically the nearest to the land-areas of the Old World; and so far as we can trace the lines of the most ancient migrations, they diverged from that region. But there are reasons stronger than these. The American In-

* "Palæolithic Man in America" in *Popular Science Monthly*, Nov., 1888.

dians cannot bear the heat of the tropics even as well as the European, not to speak of the African race. They perspire little, their skin becomes hot, and they are easily prostrated by exertion in an elevated temperature. They are peculiarly subject to diseases of hot climates, as hepatic disorders, showing none of the immunity of the African.* Furthermore, the finest physical specimens of the race are found in the colder regions of the temperate zones, the Pampas and Patagonian Indians in the south, the Iroquois and Algonkins in the north; whereas, in the tropics they are generally undersized, short-lived, of inferior muscular force and with slight tolerance of disease.†

These facts, taken in connection with the geologic events I have already described, would lead us to place the "area of characterization" of the native American east of the Rocky Mountains, and between the receding wall of the continental ice sheet and the Gulf of Mexico. There it was that the primitive glacial man underwent those changes which resulted in the formation of an independent race.

We have evidence that this change took place at a very remote epoch. The Swiss anatomist, Dr. J. Kollmann, has published a critical investigation of the most ancient skulls discovered in America, as the one I have already referred to from Calaveras county,

*"No one could live among the Indians of the Upper Amazon without being struck with their constitutional dislike to heat." "The impression forced itself upon my mind that the Indian lives as a stranger or immigrant in these hot regions." H. W. Bates, *The Naturalist on the Amazon*, Vol. II., pp. 200, 201.

† See E. F. im Thurn, *Among the Indians of Guiana*, pp. 189, 190, who speaks strongly of the debility of the tropical Indians.

California, one from Rock Bluff, Illinois, one from Pontimelo, Buenos Ayres, and others from the caverns of Lagoa Santa, Brazil, and from the loess of the Pampas. All these are credited with an antiquity going back nearly to the close of the last glacial period, and are the oldest yet found on the continent. They prove to be strictly analogous to those of the Indians of the present day. They reveal the same discrepancy in form which we now encounter in the crania of all American tribes. The Calaveras skull and that from Pontimelo are brachycephalic; those from Lagoa Santa dolichocephalic; but both possess the wide malar arches, the low orbital indices, the medium nasal apertures and the general broad faces of the present population. Dr. Kollmann, therefore, reaches the conclusion that "the variety of man in America at the close of the glacial period had the same facial form as the Indian of to-day, and the racial traits which distinguish him now, did also at that time."

The marked diversity in cranial forms here indicated is recognizable in all parts of the continent. It has frustrated every attempt to classify the existing tribes, or to trace former lines of migration, by grouping together similar head-measurements. This was fully acknowledged by the late Dr. James Aitken Meigs, of Philadelphia, who, taking the same collection of skulls, showed how erroneous were the previous statements of Dr. Morton in his *Crania Americana*. The recent studies of Virchow on American crania have attained the same conclusion.* We must

* See J. Kollman, *Zeitschrift für Ethnologie*, 1884, s. 181 sq. The conclusion of Virchow is "que les caracteres physionomiques

dismiss as wholly untenable the contrary arguments of the French and other craniologists, and still more peremptorily those attempted identifications of American skulls with "Mongolian" or "Mongoloid" types. Such comparisons are based on local peculiarities which have no racial value.

Yet it must not be supposed from this that carefully conducted cranial comparisons between tribes and families are valueless; on the contrary, the shape and size of the skull, the proportion of the face, and many other measurements, are in the average highly distinctive family traits, and I shall frequently call attention to them.

The lowest cephalic index which I have seen reported from an American skull is 56, which is that of a perforated skull from Devil river, Michigan, now in the medical museum at Ann Arbor university;* the highest is 97, from a Peruvian skull, though probably this was the result of an artificial deformity.

It is not necessary to conclude from these or other diversities in skull forms that the American race is a conglomerate of other and varied stocks. As I have pointed out elsewhere, the shape of the skull is not a

des têtes Américaines montrent une divergence si manifeste qu'on doit renoncer définitivement à la construction d'un type universel et commun des indigènes Américains." *Congrès des Américanistes*, 1888, p. 260. This is substantially the conclusion at which Dr. James Aitken Meigs arrived, in his "Observations on the Cranial Forms of the American Aborigines," in *Proc. of the Acad. Nat. Sci. of Phila.*, 1866.

* Henry Gilman, *Report of the Smithsonian Institution for 1885*, p. 239. Other perforated skulls from similar graves in the same locality showed indices of, 82, 83, 85.

fixed element in human anatomy, and children of the same mother may differ in this respect.*

A special feature in American skulls is the presence of the epactal bone, or *os Incae*, in the occiput. It is found in a complete or incomplete condition in 3.86 per cent. of the skulls throughout the continent, and in particular localities much more frequently; among the ancient Peruvians for example in 6.08 per cent., and among the former inhabitants of the Gila valley in 6.81 per cent. This is far more frequently than in other races, the highest being the negro, which offers 2.65 per cent., while the Europeans yield but 1.19.† The presence of the bone is due to a persistence of the transverse occipital suture, which is usually closed in fetal life. Hence it is a sign of arrested development, and indicative of an inferior race.

The majority of the Americans have a tendency to meso- or brachycephaly, but in certain families, as the Eskimos in the extreme north and the *Tapuyas* in Brazil, the skulls are usually decidedly long. In other instances there is a remarkable difference in members of the same tribe and even of the same household. Thus among the Yumas there are some with as low an index as 68, while the majority are above 80, and among the dolichocephalic Eskimos we occasionally find an almost globular skull. So far as can be learned, these variations appear in per-

* D. G. Brinton, *Races and Peoples; Lectures on the Science of Ethnography*, p. 20. (New York, 1890.)

† Dr. Washington Matthews, in the *American Anthropologist*, 1889, p. 337.

sons of pure blood. Often the crania differ in no wise from those of the European. Dr. Hensell, for instance, says that the skulls of pure-blood Coroados of Brazil, which he examined, corresponded in all points to those of the average German.*

The average cubical capacity of the American skull falls below that of the white, and rises above that of the black race. Taking both sexes, the Parisians of to-day have a cranial capacity of 1448 cubic centimetres; the Negroes 1344 c. c.; the American Indians 1376.† But single examples of Indian skulls have yielded the extraordinary capacity of 1747, 1825, and even 1920 cub. cent., which are not exceeded in any other race.‡

The hue of the skin is generally said to be reddish, or coppery, or cinnamon color, or burnt coffee color. It is brown of various shades, with an undertone of red. Individuals or tribes vary from the prevailing hue, but not with reference to climate. The Kolosch of the northwest coast are very light colored; but not more so than the Yurucares of the Bolivian Andes. The darkest are far from black, and the lightest by no means white.

The hair is rarely wholly black, as when examined by reflected light it will also show a faint undercolor

* *Zeitschrift für Ethnologie*, Bd. II., s. 195.

† Cf. Lucien Carr, in the *Eleventh Annual Report of the Peabody Museum*, p. 367.

‡ Lucien Carr, "Notes on the Crania of New England Indians," in the *Anniversary Memoirs of the Boston Society of Natural History*, 1880; and compare Topinard, *Elements d' Anthropologie Générale*, p. 628. (Paris, 1885.)

of red. This reddish tinge is very perceptible in some tribes, and especially in children. Generally straight and coarse, instances are not wanting where it is fine and silky, and even slightly wavy or curly. Although often compared to that of the Chinese, the resemblances are superficial, as when critically examined, "the hair of the American Indian differs in nearly every particular from that of the Mongolians of eastern Asia."* The growth is thick and strong on the head, scanty on the body and on the face; but beards of respectable length are not wholly unknown.†

The stature and muscular force vary. The Patagonians have long been celebrated as giants, although in fact there are not many of them over six feet tall. The average throughout the continent would probably be less than that of the European. But there are no instances of dwarfish size to compare with the Lapps, the Bushmen, or the Andaman Islanders. The hands and feet are uniformly smaller than those of Europeans of the same height. The arms are longer in proportion to the other members than in the European, but not so much as in the African race. This is held to be one of the anatomical evidences of inferiority.

* H. Fritsch, in *Compte-Rendu du Congrès des Américanistes*, 1888, p. 276.

† For instance, some of the Mixes of Mexico have full beards (Herrera, *Decadas de las Indias*, Dec. IV., Lib. IX., cap. VII.); the Guarayos of Bolivia wear long straight beards, covering both lips and cheeks (D'Orbigny, *L'Homme Américain*, Vol. I., p. 126); and the Cashibos of the upper Ucayali are bearded (Herndon, *Exploration of the Valley of the Amazon*, p. 209).

On the whole, the race is singularly uniform in its physical traits, and individuals taken from any part of the continent could easily be mistaken for inhabitants of numerous other parts.

This uniformity finds one of its explanations in the geographical features of the continent, which are such as to favor migrations in longitude, and thus prevent the diversity which special conditions in latitude tend to produce. The trend of the mountain chains and the flow of the great rivers in both South and North America generally follow the course of the great circles, and the migrations of native nations were directed by these geographic features. Nor has the face of the land undergone any serious alteration since man first occupied it. Doubtless in his early days the Laramie sea still covered the extensive depression in that part of our country, and it is possible that a subsidence of several hundred feet altered the present Isthmus of Panama into a chain of islands; but in other respects the continent between the fortieth parallels north and south has remained substantially the same since the close of the Tertiary Epoch.

Beyond all other criteria of a race must rank its mental endowments. These are what decide irrevocably its place in history and its destiny in time. Some who have personally studied the American race are inclined to assign its psychical potentialities a high rank. For instance, Mr. Horatio Hale hesitates not to say: "Impartial investigation and comparison will probably show that while some of the aboriginal communities of the American continent

are low in the scale of intellect, others are equal in natural capacity, and possibly superior, to the highest of the Indo-European race."* This may be regarded as an extremely favorable estimate. Few will assent to it, and probably not many would even go so far as Dr. Amedée Moure in his appreciation of the South American Indians, which he expresses in these words: "With reference to his mental powers, the Indian of South America should be classed immediately after the white race, decidedly ahead of the yellow race, and especially beyond the African."†

Such general opinions are interesting because both of them are the results of personal observations of many tribes. But the final decision as to the abilities of a race or of an individual must be based on actual accomplished results, not on supposed endowments. Thus appraised, the American race certainly stands higher than the Australian, the Polynesian or the African, but does not equal the Asian.

A review of the evidence bears out this opinion. Take the central social fact of government. In ancient America there are examples of firm and stable states, extending their sway widely and directed by definite policy. The league of the Iroquois was a thoroughly statesman-like creation, and the realm of Peru had a long and successful existence. That this mental quality is real is shown by the recent history of some of the Spanish-American republics. Two of

* "Report on the Blackfeet," in *Trans. Brit. Assoc. Adv. of Science*, 1885.

† "Les Indiens de la Province de Mato Grosso," in the *Nouvelles Annales des Voyages*, 1862.

them, Guatemala and Mexico, count among their ablest presidents in the present generation pure-blood American Indians.* Or we may take up the arts. In architecture nothing ever accomplished by the Africans or Polynesians approaches the pre-Columbian edifices of the American continent. In the development of artistic forms, whether in stone, clay or wood, the American stands next to the white race. I know no product of Japanese, Chinese or Dravidian sculpture, for example, which exhibits the human face in greater dignity than the head in basalt figured by Humboldt as an Aztec priestess.† The invention of a phonetic system for recording ideas was reached in Mexico, and is striking testimony to the ability of the natives. In religious philosophy there is ample evidence that the notion of a single incorporeal Ruler of the universe had become familiar both to Tezcucans and Kechuas previous to the conquest.

While these facts bear testimony to a good natural capacity, it is also true that the receptivity of the race for a foreign civilization is not great. Even individual instances of highly educated Indians are rare; and I do not recall any who have achieved distinction in art or science, or large wealth in the business world.

The culture of the native Americans strongly attests the ethnic unity of the race. This applies equally to the ruins and relics of its vanished nations,

*The Mexican president Benito Juarez was a full-blood Zapotec; Barrios of Guatemala, a full-blood Cakchiquel.

† *Vues des Cordillères, et Monumens des Peuples Indigènes de l'Amérique*, Tome I. p. 51.

as to the institutions of existing tribes. Nowhere do we find any trace of foreign influence or instruction, nowhere any arts or social systems to explain which we must evoke the aid of teachers from the eastern hemisphere. The culture of the American race, in whatever degree they possessed it, was an indigenous growth, wholly self-developed, owing none of its germs to any other race, ear-marked with the psychology of the stock.

Furthermore, this culture was not, as is usually supposed, monopolized by a few nations of the race. The distinction that has been set up by so many ethnographers between "wild tribes" and "civilized tribes," *Jägervölker* and *Culturvölker*, is an artificial one, and conveys a false idea of the facts. There was no such sharp line. Different bands of the same linguistic stock were found, some on the highest, others on the lowest stages of development, as is strikingly exemplified in the Uto-Aztecan family. Wherever there was a center of civilization, that is, wherever the surroundings favored the development of culture, tribes of different stocks enjoyed it to nearly an equal degree, as in central Mexico and Peru. By them it was distributed, and thus shaded off in all directions.

When closely analyzed, the difference between the highest and the average culture of the race is much less than has been usually taught. The Aztecs of Mexico and the Algonkins of the eastern United States were not far apart, if we overlook the objective art of architecture and one or two inventions. To contrast the one as a wild or savage with the

other as a civilized people, is to assume a false point of view and to overlook their substantial psychical equality.

For these reasons American culture, wherever examined, presents a family likeness which the more careful observers of late years have taken pains to put in a strong light. This was accomplished for governmental institutions and domestic architecture by Lewis H. Morgan, for property rights and the laws of war by A. F. Bandelier, for the social condition of Mexico and Peru by Dr. Gustav Brühl, and I may add for the myths and other expressions of the religious sentiment by myself.*

In certain directions doubtless the tendency has been to push this uniformity too far, especially with reference to governmental institutions. Mr. Morgan's assertions upon this subject were too sweeping. Nevertheless he was the first to point out clearly that ancient American society was founded, not upon the family, but upon the gens, totem or clan, as the social unit.† The gens is "an organized body of consanguineal kindred" (Powell), either such in reality, or, when strangers have been adopted, so considered by

* *Ancient Society*, by Lewis H. Morgan (New York, 1878); *Houses and House-Life of the American Aborigines*, by the same (Washington, 1881); Bandelier, in the *Reports of the Peabody Museum*; Dr. Gustav Brühl, *Die Culturvölker Alt Amerikas* (Cincinnati, 1887); D. G. Brinton, *The Myths of the New World*, 2d ed. (New York, 1876); *American-Hero Myths*, by the same (Philadelphia, 1882).

† The word totem is derived from the Algonkin root *od* or *ot* and means that which belongs to a person or "his belongings," in the widest sense, his village, his people, etc.

the tribal conscience. Its members dwell together in one house or quarter, and are obliged to assist each other. An indeterminate number of these gentes, make up the tribe, and smaller groups of several of them may form "phratries," or brotherhoods, usually for some religious purpose. Each gens is to a large extent autonomic, electing its own chieftain, and deciding on all questions of property and especially of blood-revenge, within its own limits. The tribe is governed by a council, the members of which belong to and represent the various gentes. The tribal chief is elected by this council, and can be deposed at its will. His power is strictly limited by the vote of the council, and is confined to affairs of peace. For war, a "war chief" is elected also by the council, who takes sole command. Marriage within the gens is strictly prohibited, and descent is traced and property descends in the female line only.

This is the ideal theory of the American tribal organization, and we may recognize its outlines almost anywhere on the continent; but scarcely anywhere shall we find it perfectly carried out. The gentile system is by no means universal, as I shall have occasion to point out; where it exists, it is often traced in the male line; both property and dignities may be inherited directly from the father; consanguine marriage, even that of brother and sister or father and daughter, though rare, is far from unexampled.* In fact, no one element of the system was uniformly re-

* Among the Brazilian hordes, for instance, Martius, *Beiträge zur Ethnographie und Sprachenkunde Amerikas*, Bd. I. s. 116 (Leipzig, 1867).

spected, and it is an error of theorists to try to make it appear so. It varied widely in the same stock and in all its expressions.* This is markedly true, for instance, in domestic architecture. The Lenâpé, who were next neighbors to the Five Nations, had nothing resembling their "long house," on which Morgan founded his scheme of communal tenements; and the efforts which some later writers have made to identify the large architectural works of Mexico and Yucatan with the communal pueblos of the Gila valley will not bear the test of criticism.

The foundation of the gentile, as of any other family life, is, as I have shown elsewhere,† the mutual affection between kindred. In the primitive period this is especially between the children of the same mother, not so much because of the doubt of paternity as because physiologically and obviously it is the mother in whom is formed and from whom alone proceeds the living being. Why this affection does not lead to the marriage of uterine brothers and sisters—why, on the contrary, there is almost everywhere a horror of such unions—it is not easy to explain. Darwin suggests that the chief stimulus to the sexual feelings is novelty, and that the familiarity of the same household breeds indifference; and we

* Thus the Heiltsuk and Kwakiutl of the northwest coast, though speaking close dialects of the same stock, differ fundamentally in their social organization. That of the former is matriarchal, of the latter patriarchal. Boas, *Fifth Report to the Brit. Assoc. Adv. Science*. p. 38.

† *Races and Peoples; Lectures on the Science of Ethnography*, p. 55 (New York, 1890).

may accept this in default of a completer explanation. Certainly, as Moritz Wagner has forcibly shown,* this repugnance to incest is wide-spread in the species, and has exerted a powerful influence on its physical history.

In America marriage was usually by purchase, and was polygamous. In a number of tribes the purchase of the eldest daughter gave the man a right to buy all the younger daughters, as they reached nubile age. The selection of a wife was often regarded as the concern of the gens rather than of the individual. Among the Hurons, for instance, the old women of the gens selected the wives for the young men, "and united them with painful uniformity to women several years their senior."† Some control in this direction was very usual, and was necessary to prevent consanguine unions.

The position of women in the social scheme of the American tribes has often been portrayed in darker colors than the truth admits. As in one sense a chattel, she had few rights against her husband; but some she had, and as they were those of her gens, these he was forced to respect. Where maternal descent prevailed, it was she who owned the property of the pair, and could control it as she listed. It passed at her death to her blood relatives and not to his. Her children looked upon her as their parent, but esteemed their father as no relation whatever.

* *Die Entstehung der Arten durch Räumliche Sonderung* (Basel, 1889).

† J. W. Sanborn, *Legends, Customs and Social Life of the Seneca Indians*, p. 36 (Gowanda, N. Y., 1878).

An unusually kind and intelligent Kolosch Indian was chided by a missionary for allowing his father to suffer for food. "Let him go to his own people," replied the Kolosch, "they should look after him." He did not regard a man as in any way related or bound to his paternal parent.

The women thus made good for themselves the power of property, and this could not but compel respect. Their lives were rated at equal or greater value than a man's;* instances are frequent where their voice was important in the councils of the tribe; nor was it very rare to see them attaining the dignity of head chief. That their life was toilsome is true; but its dangers were less, and its fatigues scarce greater, than that of their husbands. Nor was it more onerous than that of the peasant women of Europe to-day.

Such domestic arrangements seem strange to us, but they did not exclude either conjugal or parental affection. On the contrary, the presence of such sentiments has impressed travelers among even the rudest tribes, as the Eskimos, the Yumas and the hordes of the Chaco;† and Miss Alice Fletcher tells me she has constantly noted such traits in her studies of life in the wigwam. The husband and father will

* Father Ragueneau tell us that among the Hurons, when a man was killed, thirty gifts were required to condone the offence, but when a woman was the victim, forty were demanded. *Relation des Jesuites*, 1635.

† Dr. W. H. Corbusier, in *American Antiquarian*, Sept. 1886; Dr. Amedée Moure, *Les Indiens de Mato Grosso*, p. 9 (Paris, 1862).

often undergo severe privations for his wife and children.

The error to which I have referred of classifying the natives into wild and civilized tribes has led to regarding the one as agricultural, and the other as depending exclusively on hunting and fishing. Such was not the case. The Americans were inclined to agriculture in nearly all regions where it was profitable. Maize was cultivated both north and south to the geographical extent of its productive culture; beans, squashes, pumpkins, and potatoes were assiduously planted in suitable latitudes; the banana was rapidly accepted after its introduction, even by tribes who had never seen a white man; cotton for clothing and tobacco as a luxury were staple crops among very diverse stocks. The Iroquois, Algonkins and Muskokis of the Atlantic coast tilled large fields, and depended upon their harvests for the winter supplies. The difference between them and the sedentary Mexicans or Mayas in this respect was not so wide as has been represented.

It was a serious misfortune for the Americans that the fauna of the continent did not offer any animal which could be domesticated for a beast of draft or burden. There is no doubt but that the horse existed on the continent contemporaneously with post-glacial man; and some palæontologists are of opinion that the European and Asian horses were descendants of the American species;* but for some mysterious reason the genus became extinct in the New World

* This opinion is defended by Max Schlosser in the *Archiv für Anthropologie*, 1889, s. 132.

many generations before its discovery. The dog, domesticated from various species of the wolf, was a poor substitute. He aided somewhat in hunting, and in the north as an animal of draft; but was of little general utility. The llama in the Cordilleras of South America was prized principally for its hair, and was also utilized for burdens, but not for draft.* Nor were there any animals which could be domesticated for food or milk. The buffalo is hopelessly wild, and the peccary, or American hog, is irreclaimable in its love of freedom.

We may say that America everywhere at the time of the discovery was in the polished stone age. It had progressed beyond the rough stone stage, but had not reached that of metals. True that copper, bronze and the precious ores were widely employed for a variety of purposes; but flaked and polished stone remained in all parts the principal material selected to produce a cutting edge. Probably three-fourths of the tribes were acquainted with the art of tempering and moulding clay into utensils or figures; but the potter's wheel and the process of glazing had not been invented. Towns and buildings were laid out with a correct eye, and stone structures of symmetry were erected; but the square, the compass, the plumb line, and the scales and weight had not been devised.† Commodious boats of hollowed logs or of

* The llama was never ridden, nor attached for draft, though the opposite has been stated. See J. J. von Tschudi, "Das Lama," in *Zeitschrift für Ethnologie*, 1885, s. 108.

† See "The Lineal Measures of the Semi-Civilized Nations of Mexico and Central America," in my *Essays of an Americanist*, p. 433 (Philadelphia, 1890).

bark, or of skins stretched on frames, were in use on most of the waters; but the inventive faculties of their makers had not reached to either oars or sails to propel them,* the paddle alone being relied upon, and the rudder to guide them was unknown. The love of music is strong in the race, and wind instruments and those sounded by percussion had been devised in considerable variety; but the highest type, the stringed instruments, were beyond their capacity of invention.

The religious sentiment was awake in all the tribes of the continent, and even the lowest had myths and propitiatory rites by which to explain to themselves and cajole to their own interests the unknown powers which order the destiny of human life. There is a singular similarity in these myths. The leading cycle of them usually describes the exploits of a divine man, the national hero-god, who was the first instructor, often the ancestor of the tribe, and the creator of the visible universe. His later history is related with singular paralellism by tribes in Canada and Mexico, in Yucatan and Uruguay. After teaching his people the arts of life and the sacred rites, the forms of their social organizations and the medicinal powers of plants, he left in some mysterious way, not by the event of death, but for a journey, or by rising to the sky; leaving with them, however, his promise to return at some future day, when they should need him, and he should again become their guide and protector.

* The Caribs and some of the Peruvian coast tribes sometimes lifted a large square cloth when running with the wind; but this is not what is meant by a sail.

The interpretation of this fundamental American myth, which I have shown to be the typical religious legend of the race,* offers an interesting problem. Comparing it with others of similar form in Egyptian and Aryac antiquity, I have explained it as based on the natural phenomenon of the returning and departing day, as, if not a solar, at least a light myth, developed through personification and etymologic processes. Often the hero-god is identified with some animal, as the raven, the rabbit, the wolf or coyote, the jaguar, the toucan, etc. Possibly in these we may recognize the "totemic animal" after which the gens was named; but in most cases the identification cannot be made.

The hero-god is usually connected with tales of a creation and a flood, or other destruction of the world. These cosmogonical and cataclysmal myths belong together, and arise from the same impulse to explain cosmic phenomena by the analogy with ordinary changes of the seasons and the day. In constant connection with them, and also with the rites of religion and medicine, with the social institutions and the calendar, with the plans of edifices and the arrangement of gens and phratries, in fact, with all the apparatus of life, was a respect for the *sacred number*. It is strange how constantly this presents itself throughout American life, and is, in fact, the key to many of its forms. The sacred number is Four, and its origin is from the four cardinal points. These were the guides to the native in his wanderings, and, as identified with the winds, were the deities who

* *American Hero-Myths* (Philadelphia, 1882).

brought about the change of the seasons and the phenomena of the weather. They were represented by the symbols of the cross, whose four arms we see portrayed on the altar tablet of Palenque, on the robes of the Mexican priests, in the hieroglyphs of the Algonkins, and in countless other connections.

A rich symbolism rapidly developed in all the sedentary tribes, and very much along the same lines. The bird, the serpent, the sacred stone, the tree of life, water as a purifier, the perpetual fire, all these are members of a religious symbolism, clear signs of which recur in all segments of the continent. The chants and dances, the ritual of the medicine men, the functions of esoteric orders and secret societies, present a resemblance greater than that which can be explained by a mere similarity in the stage of culture. I explain it by the ethnic and psychical unity of the race, and its perpetual freedom from any foreign influence.

The mortuary rites indicated a belief in the continued existence of the individual after apparent death. These were by incineration, by inhumation, by exposure, or by mummification. Articles were placed with the deceased for use in his future state, and the ceremonies of mourning were frequently severe and protracted. A sacredness was generally attached to the bones and therefore these were carefully preserved. In accordance with a superstition widely felt in the Old World, they were supposed to harbor some share of the departed spirit. The conception of the after life is wholly material. The Zapotec, for instance, believes that he will return to

his familiar haunts after a few hundred years, and buries all the money he makes that he may then live at his ease. Von Gagern estimates the amount of silver thus secreted and lost within the last century at a hundred million dollars.*

The ceremonies of religion, which included that of the treatment of disease, inasmuch as a demonic cause was always assigned to illness, were in the hands of a particular class, known to the whites as "medicine men," or shamans, or sorcerers. Sometimes the right of belonging to this order was hereditary in a gens, but generally peculiar aptitude for the business was the only requirement. Many of them were skilled in legerdemain, and even to-day some of their tricks puzzle the acutest white observers. As doctors, augurs, rain-makers, spell-binders, leaders of secret societies, and depositaries of the tribal traditions and wisdom, their influence was generally powerful. Of course it was adverse to the Europeans, especially the missionaries, and also of course it was generally directed to their own interest or that of their class; but this is equally true of priestly power wherever it gains the ascendancy, and the injurious effect of the Indian shamans on their nations was not greater than has been in many instances that of the Christian priesthood on European communities.

The psychic identity of the Americans is well illustrated in their languages. There are indeed indefinite discrepancies in their lexicography and in their surface morphology; but in their logical sub-

* Carlos de Gagern, *Charakteristik der Indianischen Bevölkerung Mexikos*, s. 23 (Wien, 1873).

structure, in what Wilhelm von Humboldt called the "inner form," they are strikingly alike. The points in which this is especially apparent are in the development of pronominal forms, in the abundance of generic particles, in the overweening preference for concepts of action (verbs), rather than concepts of existence (nouns), and in the consequent subordination of the latter to the former in the proposition. This last mentioned trait is the source of that characteristic which is called *incorporation*. The American languages as a rule are essentially incorporative languages, that is, they formally include both subject and object in the transitive concept, and its oral expression. It has been denied by some able linguists that this is a characteristic trait of American languages; but I have yet to find one, of which we possess ample means of analysis, in which it does not appear in one or another of its forms, thus revealing the same linguistic impulse. Those who reject it as a feature have been led astray either by insufficient means of information about certain languages, or by not clearly comprehending the characteristics of the incorporative process itself.*

As intimated, however, in spite of this underlying sameness, there is wide diversity in the tongues themselves. Where we cannot find sufficient coincidences of words and grammar in two languages to admit of supposing that under the laws of linguistic science they are related, they are classed as independent

* I have treated this subject at considerable length in opposition to the opinion of Lucien Adam and Friederich Müller in my *Essays of an Americanist*, pp. 349-389 (Philadelphia, 1890).

stocks or families. Of such, there are about eighty in North and as many in South America. These stocks offer us, without doubt, our best basis for the ethnic classification of the American tribes; the only basis, indeed, which is of any value. The efforts which have been heretofore made to erect a geographic classification, with reference to certain areas, political or physical; or a craniological one, with reference to skull forms; or a cultural one, with reference to stages of savagery and civilization, have all proved worthless. The linguistic is the only basis on which the subdivision of the race should proceed. Similarity of idioms proves to some extent similarity of descent and similarity of psychic endowments. Of course, there has been large imposition of one language on another in the world's history; but never without a corresponding infiltration of blood; so that the changes in language remain as evidence of national and race comminglings. I select, therefore, the linguistic classification of the American race as the only one of any scientific value, and, therefore, that which alone merits consideration.

The precise number of linguistic stocks in use in America at the discovery has not been made out. In that portion of the continent north of Mexico the researches of the Bureau of Ethnology of the United States have defined fifty-nine stocks, no less than forty of which were confined to the narrow strip of land between the Rocky mountains and the Pacific ocean.

For convenience of study I shall classify all the stocks into five groups, as follows:—

- I. The North Atlantic Group.
- II. The North Pacific Group.
- III. The Central Group.
- IV. The South Pacific Group.
- V. The South Atlantic Group.

This arrangement is not one of convenience only; I attach a certain ethnographic importance to this classification. There is a distinct resemblance between the two Atlantic groups, and an equally distinct contrast between them and the Pacific groups, extending to temperament, culture and physical traits. Each of the groups has mingled extensively within its own limits, and but slightly outside of them. Each is subject to conditions of temperature, altitude and humidity, which are peculiar to itself, and which have exerted definite influences on the constitution and the history of its inhabitants. Such a subdivision of the race is therefore justified by anthropologic considerations.

I. THE NORTH ATLANTIC GROUP.

I. THE ESKIMOS.

THE word Eskimo, properly *Eski-mwhan*, means in the Abnaki dialect of Algonquin, "he eats raw flesh," and was applied to the tribe from its custom of consuming fish and game without cooking. They call themselves *Innuït*, "people," a term the equivalent of which is the usual expression applied by American natives to their own particular stock.

The Innuït are at present essentially a maritime and arctic nation, occupying the coast and adjacent islands from the Straits of Belle Isle on the Atlantic to Icy Bay, at the foot of Mount St. Elias on the Pacific, and extending their wanderings and settlements as far up Smith's Sound as N. Lat. 80°, where they are by far the northernmost inhabitants of the earth. They have occupied Greenland for certainly more than a thousand years, and were the earliest settlers in some of the Aleutian islands. Portions of them at some remote period crossed Behring Strait and settled on Asiatic soil, while others established themselves along the shores of Newfoundland. Indeed, from the reports of the early Norse explorers and from the character of relics found on the Atlantic coast, it is probable that they once extended as far

south as the mouth of the Delaware river.* Their ancestors quite possibly dwelt on the moors of New England when the reindeer browsed there, and accompanied that quadruped in its final migration to the north. They belong in history and character to the Atlantic peoples.

This question, as to where their common progenitors resided, has been much discussed. A favorite theory of some writers has been that they migrated out of Asia by way of Behring Strait; but those who have studied their culture on the spot do not advocate this opinion. These observers have, without exception, reached the conclusion that the Innuit were originally an inland people, that their migrations were toward the north and west, and that they have been gradually forced to the inhospitable climes they occupy by the pressure of foes. Dr. Rink, who passed many years among them, would look for their early home somewhere in Alaska; but Mr. John Murdoch and Dr. Franz Boas, two of our best authorities on this tribe, incline to the view that their primal home was to the south of Hudson Bay, whence they separated into three principal hordes, the one passing into Labrador and reaching Greenland, the second moving to the coast of the Arctic sea, and the third to Alaska. These form respectively the Greenland, the Chiglit and the Kadjak dialects of the common tongue.†

* Packard, "Notes on the Labrador Eskimo and their former range southward," in *American Naturalist*, 1885, p. 471.

† John Murdoch, in *The American Anthropologist*, 1888, p. 129; also Dr. Henry Rink, *The Eskimo Tribes* (London, 1887); Dr.

The closest observers report the physical traits of the Eskimos as thoroughly American and not Asian, as has sometimes been alleged.* In appearance the Innuits of pure blood are of medium or slightly undersize, color dark, nose prominent and sometimes aquiline, hair dark brown or black, moderately strong on the face, the pubes and in the axilla; the eyes are dark brown and occasionally blue. The skull is generally long (dolichocephalic), but is subject to extensive variations ranging from almost globular to exceptionally long and narrow specimens.†

In spite of the hardships of their life, the Innuits are of a singularly placid and cheerful temperament, good-natured among themselves and much given to mirth and laughter.‡ The ingenuity with which they have learned to overcome the difficulties of their

Franz Boas, *The Central Eskimo*, in the *Sixth Annual Report of the Bureau of Ethnology*; W. H. Dall, *Tribes of the Extreme Northwest* (Washington, 1887); Ivan Petroff, in *The American Naturalist*, 1882, p. 567.

*Dall is positive that there is no racial distinction between the Inuit and the other American Indians, loc. cit., p. 95. He adds: "The Tatar, Japanese or Chinese origin of these people finds no corroboration in their manners, dress or language."

†Commander G. Holm found the East Greenlanders, a pure stock, well marked mesocephalic, with a maximum of 84.2 (*Les Grönlandais Orientaux*, p. 365, Copenhagen, 1889). Dall gives the range in his measurements of Inuit skulls from 87 to 70 (*Contributions to American Ethnology*, Vol. I, p. 71).

‡ "Unlike the Indian" writes Mr. F. F. Payne, "the Eskimo is nearly always laughing, and even in times of great distress it is not hard to make them smile." "The Eskimo at Hudson Strait," in *Proc. Canad. Institute*, 1889, p. 128.

situation is quite surprising. In a country without wood or water, frightfully cold, and yielding no manner of edible fruit or vegetable, they manage to live and thrive. Their principal nurriture is the product of the sea. They build boats called *kayaks* or *bidarkas* from the bones of walrus covered with the skins of seals; their winter houses are of blocks of snow laid up on the principle of the circular arch to form a dome, with windows of sheets of ice. These they warm by means of stone lamps fed with blubber oil. Their clothing is of bird skins and furs, and they are skilled in the preparation of a sort of leather. As faithful companions they have their dogs, intelligent animals, used both in hunting and for drawing small sledges built of wood or bone.

With their tools of bone or stone they fashion many curious and useful articles, displaying a marked inventive faculty and an artistic eye. The picture-writing which they devised for the assistance of their memory is greatly superior to any found north of Mexico in the faithful delineation of objects, especially of animal forms.*

The long winter nights are enlivened by music and songs, of which they are passionately fond, and by the recital of imaginative tales, the stock of which is inexhaustible. A skillful bard enjoys a wide reputation, and some of their poems contain fine and delicate sentiments.† Others are from ancient date, and are

* W. J. Hoffman, "On Indian and Eskimo Pictography," in *Trans. Anthropol. Soc. of Washington*, Vol. II, p. 146.

† See some examples in my *Essays of an Americanist*, pp. 288-290 (Philadelphia, 1890).

passed down from generation to generation with scrupulous fidelity, every tone, every gesture, being imitated. The meter and rendition of their songs seem to the European monotonous, but the Eskimo has his own notion of the music of verse, and it is a very advanced one; he would have it akin to the sweet sounds of nature, and for that reason their poets sleep by the sound of running water that they may catch its mysterious notes, and model on them their own productions.* These songs also serve as a peaceful means to allay feuds. When two persons quarrel, they will appoint an evening and sing "nith songs" at each other, and the audience will decide which comes out best. This verdict will put an end to the ill-feeling.

The imaginative character of the people is also reflected in their religions. They believe in one or several overruling powers, and in a multitude of inferior spirits and uncanny monsters. These require propitiation rather than worship. The general belief is that a person has two souls, one of which is inseparably connected with his name and passes with it to any infant named for him; while the second either descends to a warm and pleasant abode under the earth or passes to a less agreeable one in the sky; the streaming lights of the aurora borealis were sometimes thought to be these latter spirits in their celestial home.

The rites of their religion were performed chiefly by the priests, called *angedkoks*, who, however, were

*G. Holm, *Les Grönlandais Orientaux*, p. 382 (Copenhagen, 1889).

little better than conjurors. In some parts this office was hereditary.

The language of the Innuits is very much the same throughout the whole of their extended domain. Bishop de Schweinitz once told me that a few years ago a convert from the Moravian mission in Labrador went to Alaska, and it required but a few weeks for him to understand and be understood by the natives there. In character the tongue is highly agglutinative, the affixes being joined to the end of the word. The verb is very complex, having thirty-one hundred modified forms, all different and all invariable.* It is rich in expressions for all the objects of Eskimo life, and is harmonious to the ear. Like the Greek, it has three numbers, singular, dual and plural.

Those Eskimos who live in Asia call themselves *Yuit*, a dialect form of Inuit. They dwell around East Cape and the shore south of it, in immediate contact with the Namollos or Sedentary Chukchis, a Sibiric people, totally different in language, appearance and culture. The Yuits have not at all assimilated to the reindeer-keeping, pastoral habits of the Chukchis, and by their own well-preserved traditions, moved across the straits from the American side, with which they continue commercial intercourse. Their villages are sometimes close to those of the Namollos, or Sedentary Chukchis, they intermarry, and have a jargon sufficient for their mutual purposes; but it is an error, though a prevailing one, to suppose that

* Dr. A. Pfizmaier, *Darlegungen Grönländischer Verbalformen* (Wien, 1885).

they are the same people. The Chukchis never entered America, and the Innuits, as a people, never crossed from Asia, or originated there.* The jade implements of northeastern Siberia have proved to be of the Alaskan variety of that stone, and not the Chinese jade, as some supposed.†

From all points whence we have definite information, this interesting people are steadily diminishing in numbers, even where they are not in contact with the whites. The immediate causes appear to be increasing sterility and infant mortality. Two surviving children to a marriage is about the average productiveness, and statistics show that it requires double this number for a population to maintain itself even stationary.

The *Aleutian* branch occupies the long chain of islands which stretch westward from the southwestern corner of Alaska. The climate is mild, the sea abounds in fish, and innumerable birds nest in the rocks. We may therefore believe the navigators of the last century, who placed the population of the islands at 25,000 or 30,000 souls, although at present they have sunk to about 2,000. They have the same

* On the relative position of the Chukchis, Namollos and Yuit, consult Dall in *American Naturalist*, 1881, p. 862; J. W. Kelly, in *Circular of the U. S. Bureau of Education*, No. 2, 1890, p. 8; A. Pfizmaier, *Die Sprachen der Aleuten*, p. 1 (Vienna, 1884). The Yuits are also known as *Tuski*. The proper location of the Namollos is on the Arctic Sea, from East Cape to Cape Shelagskoi (Dall).

† *Proceedings of the U. S. National Museum*, 1883, p. 427. All of Clement G. Markham's arguments for the Asiatic origin of the Eskimos have been refuted.

cheerful temperament as the Eskimos, and their grade of culture was, when first discovered, about the same. In their own language they call themselves *Unangan*, people, the name Aleutes having been given them by the Russians.*

It may be considered settled that their ancestors populated the islands from the American and not the Asiatic side. Not only do their own traditions assert this,† but it is confirmed by the oldest relics of their culture, which is Eskimo in character, and by their language, which is generally acknowledged to be a derivative of the Alaskan Eskimo.‡ It is divided into two dialects, the Unalashkan and Atkan; not very dissimilar, and is remarkable for the richness of its verbal forms.||

In physical traits they are allied to the Eskimos, though with rounder heads, the average of twenty-five skulls giving an index of 80.§ Early in this century they were brought under the control of Russian missionaries, and became partially civilized and attached to the Greek Church. In their ancient myths their earliest ancestor was said to have been the dog,

* Either from the river Olutora and some islands near its mouth (Petroff); or from Eleutes, a tribe in Siberia, whom the Russians thought they resembled (Pinart).

† Ivan Petroff, in *Trans. Amer. Anthropol. Soc.*, Vol. II, p. 90.

‡ Comp. H. Winkler, *Ural-Altäische Völker und Sprachen*, s. 119, and Dall, *Contributions to N. Amer. Ethnology*, Vol. I, p. 49, who states that their tongue is distinctly connected with the Innuits of Alaska.

|| Dr. A. Pfizmaier, *Die Sprache der Aleuten und Fuchsinselfn*, s. 4 (Vienna, 1884).

§ Dall, loc. cit., p. 47.

which animal was therefore regarded with due respect.*

2. THE BEOTHUKS.

Adjacent to the Labrador Eskimos and the northern Algonkins, upon the Island of Newfoundland, dwelt the Beothuks, or "Red Indians," now extinct, who in custom and language differed much from their neighbors of the mainland. Although called "red," they are also said to have been unusually light in complexion, and the term was applied to them from their habit of smearing their bodies with a mixture of grease and red ochre. They are further described as of medium stature, with regular features and aquiline noses, the hair black and the beard scanty or absent.

In several elements of culture they had marked differences from the tribes of the adjacent mainland. Their canoes were of bark or of skins stretched on frames, and were in the shape of a crescent, so that they required ballast to prevent them from upsetting. The winter houses they constructed were large conical lodges thirty or forty feet in diameter, having a frame of light poles upon which was laid bark or skins, generally the latter. Hunting and fishing provided them with food, and they have left the reputation of irreclaimable savages. They had no dogs, and the art of pottery was unknown; yet they were not unskilled as artisans, carving images of wood, dressing stone for implements, and tanning deerskins for clothing. An examination of their language discloses some words borrowed from the Algonkin, and slight coincidences

* Ivan Petroff, loc. cit., p. 91.

with the Eskimo dialects, but the main body of the idiom stands alone, without affinities. Derivation was principally if not exclusively by suffixes, and the general morphology seems somewhat more akin to Eskimo than Algonkin examples.*

3. THE ATHABASCANS (TINNÉ).

Few linguistic families on the continent can compare in geographical distribution with that known as the Athabaskan, Chepewyan or Tinné. Of these synonyms, I retain the first, as that adopted by Buschmann, who proved, by his laborious researches, the kinship of its various braches.† These extend interruptedly from the Arctic Sea to the borders of Durango, in Mexico, and from Hudson Bay to the Pacific.

In British America this stock lies immediately north of the Algonkins, the dividing line running approximately from the mouth of the Churchill river on Hudson Bay to the mouth of the Frazer, on the Pacific. To the north they are in contact with the Eskimos and to the west with the tribes of the Pacific coast. In this wide but cold and barren area they are divided into a number of bands, without coherence, and speaking dialects often quite unlike. The Loucheux have reached the mouth of the Mackenzie river,

* Mr. A. S. Gatschet has compiled the accessible information about the Beothuk language in two articles in the *Proceedings of the American Philosophical Society*, 1885 and 1886.

† J. C. E. Buschmann, *Der Athapaskische Sprachstamm*, 4to., Berlin, 1856, and *Die Verwandtschafts-Verhältnisse der Athapaskischen Sprachen*, Berlin, 1863.

the Kuchin are along the Yukon, the Kenai on the ocean about the peninsula that bears their name, while the Nehaunies, Secaunies and Takullies are among the mountains to the south. The Sarcees lived about the southern headwaters of the Saskatchewan, while other bands had crossed the mountains and wandered quite to the Pacific coast, where they appear as Umpquas near Salem, Oregon; as Tututenas on Rogue river; and in California as Hupas, on and about Trinity river. These are but a small fraction of the great southern migration of this stock. The Navajos belong to it, and the redoubted Apaches, who extended their war parties far into Mexico, and who were the main agents in destroying the civilization which ages ago began to reveal fair promise in the valleys of the Gila and its affluents, and who up to very recent years defied alike the armies of both Mexico and the United States. Their southern migrations beyond the valley of the Gila probably do not date far back, that is, much beyond the conquest. Although the Mexican census of 1880 puts the Mexican Apaches at ten thousand, no such number can be located. Orozco y Berra mentions one of their tribes in Chihuahua, which he calls Tobosos; but Spanish authors refer to these as living in New Mexico in 1583. The only Apache band now known to be in Mexico are the Janos or Janeros in Chihuahua, made up of Lipans and Mescaleros. (Henshaw.)

Wherever found, the members of this group present a certain family resemblance. In appearance they are tall and strong, the forehead low with prominent superciliary ridges, the eyes slightly oblique,

the nose prominent but wide toward the base, the mouth large, the hands and feet small. Their strength and endurance are often phenomenal, but in the North at least, their longevity is slight, few living beyond fifty. Intellectually they rank below most of their neighbors, and nowhere do they appear as fosterers of the germs of civilization. Where, as among the Navajos, we find them having some repute for the mechanical arts, it turns out that this is owing to having captured and adopted the members of more gifted tribes. Their temperament is inclined to be gloomy and morose; yet in spite of their apparent stolidity they are liable to panic terrors, to epidemic neuroses, temporary hallucinations and manias—a condition not at all rare among peoples of inferior culture.*

Nowhere do we find among them any form of government. Their chiefs are chosen without formality, either on account of their daring in war or for their generosity in distributing presents. The office is not hereditary, there is rarely even any war chief, their campaigns being merely hurried raids. A singular difference exists as to their gentile systems, and their laws of consanguinity. Usually it is counted in the female line only. Thus among the Takullies of the north a son does not consider his father any relation, but only his mother and her people. When a man dies, all his property passes to his wife's family. The totems are named from animals, and as usual a wife must be selected from another totem. This does not

*See Mgr. Henry Faraud, *Dix-huit Ans chez les Sauvages*, pp. 345, etc. (Paris, 1866.) Petitot, *Les Déné Dindjît*, p. 32.

stand in the way of a son being united to his father's sister, and such a marriage is often effected for property reasons. Among the Sarcees the respect for a mother-in-law is so great that her son-in-law dares not sit at a meal with her, or even touch her, without paying a fine. Among the Navajo and Apache tribes the son also follows the gens of the mother, while in the Umpqua and Tutu branches in Oregon he belongs to that of his father. In all the southern tribes the gens is named from a place, not an animal.* Marriage is polygamous at will, wives are obtained by purchase, and among the Slave Indians the tie is so lax that friends will occasionally exchange wives as a sign of amity. Usually the position of the woman is abject, and marital affection is practically unknown; although it is said that the Nehaunies, a tribe of eastern Alaska, at one time obeyed a female chief.

The arts were in a primitive condition. Utensils were of wood, horn or stone, though the Takully women manufactured a coarse pottery, and also spun and wove yarn from the hair of the mountain goat. Agriculture was not practised either in the north or south, the only exception being the Navajos and with them the inspiration came from other stocks.† The Kuchin of the Yukon make excellent bark canoes, and

*See George M. Dawson, in *An. Rep. of the Geol. Survey of Canada*, 1887, p. 191, sq.; Washington Matthews and J. G. Bourke, in *Jour. of Amer. Folk-Lore*, 1890, p. 89, sq.

† The best blanket makers, smiths and other artisans among the Navajos are descendants of captives from the Zuñi and other pueblos. John G. Bourke, *Journal of American Folk-Lore*, 1890, p. 115.

both they and their neighbors live in skin tents of neatly dressed hides. Many of the tribes of the far north are improvident in both clothing and food, and cannibalism was not at all uncommon among them.

The most cultured of their bands were the Navajos, whose name is said to signify "large cornfields," from their extensive agriculture. When the Spaniards first met them in 1541 they were tillers of the soil, erected large granaries for their crops, irrigated their fields by artificial water courses or *acequias*, and lived in substantial dwellings, partly underground; but they had not then learned the art of weaving the celebrated "Navajo blankets," that being a later acquisition of their artisans.*

In their religions there was the belief in deified natural forces and in magic that we find usually at their stage of culture. The priests or shamans were regarded with fear, and often controlled the counsels of the tribe. One of their prevalent myths was that of the great thunder-bird often identified with the raven. On the Churchill river it was called *Idi*, and the myth related that from its brooding on the primeval waters the land was brought forth. The myth is found too widespread to be other than genuine. The Sarcees seem to have had some form of solar worship, as they called the sun Our Father and the earth Our Mother.

The Navajos, who have no reminiscence of their ancestral home in the north, locate the scene of their creation in the San Juan mountains, and its date

* A. F. Bandelier, *Indians of the Southwestern United States*, pp. 175-6 (Boston, 1890).

about seven centuries ago. Their story is that the first human pair were formed of the meal of maize brought by the gods from the cliff houses in the cañons.*

The Athabascan dialects are usually harsh and difficult of enunciation. In reducing them to writing, sixty-three characters have to be called on to render the correct sounds.† There is an oral literature of songs and chants, many of which have been preserved by the missionaries. The Hupas of California had extended their language and forced its adoption among the half-dozen neighboring tribes whom they had reduced to the condition of tributaries.‡

ATHABASCAN LINGUISTIC STOCK.

Apaches, in Arizona, Chihuahua, Durango, etc.

Ariquipas, in southern Arizona.

Atnahs, on Copper River, Alaska.

Beaver Indians, see *Sarcees*.

Chepewyans, north of the Chipeways.

Chiricahuas, in southern Arizona.

Coyoteros, in southern Arizona.

Hupas, in California, on Trinity River.

Janos, in Chihuahua, near Rio Grande.

Jicarillas, in northern New Mexico.

Kenais, on and near Kenai peninsula, Alaska.

Kuchins, on Yukon and Copper rivers, Alaska.

Lipanes, near mouth of Rio Grande, (properly, *Ipa-ndé*).

Loucheux, on lower Mackenzie river; most northern tribe.

* Dr. Washington Matthews, in *Journal of American Folk-Lore*, 1890, p. 90.

† The student of this language finds excellent material in the *Dictionnaire de la Langue Dènè-Dindjîè*, par E. Petitot (folio, Paris, 1876), in which three dialects are presented.

‡ Stephen Powers, *Tribes of California*, p. 72, 76 (Washington, 1877).

Mescaleros, in New Mexico, W. of Rio Grande.

Montagnais, north of Chipeways.

Nahaunies, on Stickine and Talton rivers, Alaska.

Navajos, northern New Mexico and Arizona.

Sarcees, on upper Saskatchewan and at Alberta.

Sicaunies, on upper Peach river.

Slaves, on upper Mackenzie river.

Tacullies, head waters of the Fraser river, Brit. Col.

Tinné, synonym of Athabascan.

Tututenas, on Rogue river, Oregon.

Umpquas, Pacific coast near Salem, Oregon.

4. THE ALGONKINS.

The whole of the north Atlantic coast, between Cape Fear and Cape Hatteras, was occupied at the discovery by the Algonkin stock. Their northern limit reached far into Labrador, where they were in immediate contact with the Eskimos, and along the southern shores of Hudson Bay, and its western litoral as far north as Churchill river. In this vicinity lived the Crees, one of the most important tribes, who retained the language of the stock in its purest form. West of them were the Ottawas and Chipeways, closely allied in dialect, and owners of most of the shores of lakes Michigan and Superior. Beyond these again, and separated from them by tribes of Dakota stock, were the Blackfeet, whose lands extended to the very summit of the Rockies. South of the St. Lawrence were the Abnakis or Eastlanders, under which general name were included the Micmacs, Echemin's and others. The whole of the area of New England was occupied by Algonkins, whose near relatives were the Mohegans of the lower Hudson. These were in place and dialect near to the

Lenâpés of the Delaware valley, and to the vagrant Shawnees; while the Nanticokes of Maryland, the Powhatans of Virginia and the Pamticokes of the Carolinas diverged more and more from the purity of the original language.

These and many other tribes scattered over this vast area were related, all speaking dialects manifestly from the same source. Where their ancient home was situated has been the subject of careful investigations, the result of which may be said to be that traditions, archæology and linguistic analysis combine to point to the north and the east, in other words, to some spot north of the St. Lawrence and east of Lake Ontario, as the original home of the stock.

The Algonkins may be taken as typical specimens of the American race. They are fully up to the average stature of the best developed European nations, muscular and symmetrical. The distinguished anthropologist Quetelet measured with great care six members of the Chipeway tribe, and pronounced them as equaling in all physical points the best specimens of the Belgians.* Their skulls are generally dolichocephalic, but not uniformly so. We have in the collection of the Academy seventy-seven Algonkin crania, of which fifty-three are dolichocephalic, fourteen mesocephalic, and ten brachycephalic.† The

* "On voit que leur conformation est à peu pres exactment le nôtre." Quetelet, "Sur les Indiens O-jib-be-was," in *Bull. Acad. Royale de Belgique*, Tome XIII.

† I refer to the Academy of Natural Sciences, Philadelphia. The numerous measurements of skulls of New England Algonkins by Lucien Carr, show them to be mesocephalic tending to dolichoce-

eyes are horizontal, the nose thin and prominent, the malar bones well marked, the lips thin. The color is a coppery brown, the hair black and straight, though I have seen a slight waviness in some who claim purity of blood. The hands and feet are small, the voice rich and strong. Physical endurance is very great, and under favorable circumstances the longevity is fully up to that of any other race.

The totemic system prevailed among the Algonkin tribes, with descent in the female line; but we do not find among them the same communal life as among the Iroquois. Only rarely do we encounter the "long house," occupied by a number of kindred families. Among the Lenâpés, for example, this was entirely unknown, each married couple having its own residence. The gens was governed by a chief, who was in some cases selected by the heads of the other gentes. The tribe had as permanent ruler a "peace chief," selected from a particular gens, also by the heads of the other gentes. His authority was not absolute, and, as usual, did not extend to any matter concerning the particular interests of any one gens. When war broke out, the peace chief had no concern in it, the campaign being placed in charge of a "war chief," who had acquired a right to the position by his prominent prowess and skill.

While the Mohegans built large communal houses, the Lenâpés and most of the eastern Algonkins constructed small wattled huts with rounded tops,

phaly, orthognathic, mesorhine and megaseme. See his article, "Notes on the Crania of New England Indians," in the *Anniversary Memoirs of the Boston Society of Natural History*, 1880.

thatched with the leaves of the Indian corn or with sweet flags. These were built in groups and surrounded with palisades of stakes driven into the ground. In summer, light brush tents took the place of these. Agriculture was by no means neglected. The early explorers frequently refer to large fields of maize, squash and tobacco under cultivation by the natives. The manufacture of pottery was widespread, although it was heavy and coarse. Mats woven of bark and rushes, deer skins dressed with skill, feather garments, and utensils of wood and stone, are mentioned by the early voyagers. Copper was dug from veins in New Jersey and elsewhere and hammered into ornaments, arrowheads, knives and chisels. It was, however, treated as a stone, and the process of smelting it was unknown. The arrow and spear heads were preferably of quartz, jasper and chert, while the stone axes were of diorite, hard sandstone, and similar tough and close grained material.* An extensive commerce in these and similar articles was carried on with very distant points. The red pipe-stone was brought to the Atlantic coast from the Coteau des Prairies, and even the black slate highly ornamented pipes of the Haidah on Vancouver Island have been exhumed from graves of Lenâpé Indians.

Nowhere else north of Mexico was the system of picture writing developed so far as among the Algonkins, especially by the Lenâpés and the Chipeways. It had passed from the representative to the symbolic stage, and was extensively employed to preserve the

* The best work on this subject is Dr. C. C. Abbott's *Primitive Industry* (Salem, 1881).

national history and the rites of the secret societies. The figures were scratched or painted on pieces of bark or slabs of wood, and as the color of the paint was red, these were sometimes called "red sticks." One such, the curious *Walum Olum*, or "Red Score," of the Lenâpés, containing the traditional history of the tribe, I was fortunate enough to rescue from oblivion, and have published it with a translation.* The contents of others relating to the history of the Chipeways (Ojibways) have also been partly preserved.

The religion of all the Algonkin tribes presented a distinct similarity. It was based on the worship of Light, especially in its concrete manifestations, as the sun and fire; of the Four Winds, as typical of the cardinal points, and as the rain bringers; and of the Totemic Animal. Their myths were numerous, the central figure being the national hero-god Manibozho or Michabo, often identified with the rabbit, apparently from a similarity in the words. He was the beneficent sage who taught them laws and arts, who gave them the maize and tobacco, and who on his departure promised to return and inaugurate the Golden Age. In other myths he is spoken of as the creator of the visible world and the first father of the race. Along with the rites in his worship were others directed to the Spirits of the Winds, who bring about the change of seasons, and to local divinities.

* *The Lenâpé and their Legends; with the Complete Text and Symbols of the Walam Olum, and an Inquiry into its Authenticity.* By Daniel G. Brinton, Philadelphia, 1885 (Vol. V. of Brinton's *Library of Aboriginal American Literature*).

The dead as a rule were buried, each gens having its own cemetery. Some tribes preserved the bones with scrupulous care, while in Virginia the bodies of persons of importance were dried and deposited in houses set apart for the purpose.

The tribe that wandered the furthest from the primitive home of the stock were the Blackfeet, or Sisika, which word has this signification. It is derived from their earlier habitat in the valley of the Red river of the north, where the soil was dark and blackened their moccasins. Their bands include the Blood or Kenai and the Piegan Indians. Half a century ago they were at the head of a confederacy which embraced these and also the Sarcee (Tinné) and the Atsina (Caddo) nations, and numbered about thirty thousand souls. They have an interesting mythology and an unusual knowledge of the constellations.*

The Lenâpés were an interesting tribe who occupied the valley of the Delaware river and the area of the present State of New Jersey. For some not very clear reason they were looked upon by the other members of the stock as of the most direct lineage, and were referred to as "grandfather." Their dialect, which has been preserved by the Moravian Missionaries, is harmonious in sound, but has varied markedly from the purity of the Cree.† It has lost, for instance, the

* See Horatio Hale, "*Report on the Blackfeet*," in *Proc. of the Brit. Assoc. for the Adv. of Science*, 1885.

† See *Lenâpé-English Dictionary: From an anonymous MS. in the Archives of the Moravian Church at Bethlehem, Pa.* Edited with additions by Daniel G. Brinton, M. D., and Rev. Albert Seqaqkind Anthony. Published by the Historical Society of Pennsylvania. Philadelphia, 1888. Quarto, pp. 236.

peculiar vowel change which throws the verb from the definite to the indefinite form. The mythology of the Lenâpés, which has been preserved in fragments, presents the outlines common to the stock.

ALGONKIN LINGUISTIC STOCK.

Abnakis, Nova Scotia and S. bank of St. Lawrence.

Arapahoes, head waters of Kansas river.

Blackfeet, head waters of Missouri river.

Cheyennes, upper waters of Arkansas river.

Chipeways, shores of Lake Superior.

Crees, southern shores of Hudson Bay.

Delawares, see *Lenâpés*.

Illinois, on the Illinois river.

Kaskaskias, on Mississippi, below Illinois river.

Kikapoos, on upper Illinois river.

Lenâpés, on the Delaware river.

Meliseets, in Nova Scotia and New Brunswick.

Miamis, between Miami and Wabash rivers.

Micmacs, in Nova Scotia.

Menomonees, near Green Bay.

Mohegans, on lower Hudson river.

Manhattans, about New York Bay.

Nanticokes, on Chesapeake Bay.

• *Ottawas*, on the Ottawa river and S. of L. Huron.

Pampticokes, near Cape Hatteras.

Passamaquoddies, on Schoodic river.

Piankishaws, on middle Ohio river.

Piegans, see *Blackfeet*.

Pottawattomies, S. of Lake Michigan.

Sauteux, see *Crees*.

Sacs and Foxes, on Sac river.

Secoffies, in Labrador.

Shawnees, on Tennessee river.

Weas, near the Piankishaws.

5. THE IROQUOIS.

When the French first explored the St. Lawrence River, they found both its banks, in the vicinity where the cities of Montreal and Quebec now stand, peopled by the *Iroquois*. This tribe also occupied all the area of New York state (except the valley of the lower Hudson), where it was known as the Five Nations. West of these were the Hurons and Neutral Nation in Canada, and the Eries south of Lake Erie, while to the south of the Five Nations, in the valley of the Susquehanna and pushing their outposts along the western shore of Chesapeake Bay to the Potomac, were the Andastes and Conestogas, called also Susquehannocks. Still further south, about the head-waters of the Roanoke River, dwelt the Tuscaroras, who afterwards returned north and formed the sixth nation in the league. West of the Apalachians, on the upper waters of the Tennessee River, lived the Cherokees, who, by their tradition, had moved down from the upper Ohio, and who, if they were not a branch of the same family, were affiliated to it by many ancient ties of blood and language. The latest investigations of the Bureau of Ethnology result in favor of considering them a branch, though a distant one, of the Iroquois line.

The stock was wholly an inland one, at no point reaching the ocean. According to its most ancient traditions we are justified in locating its priscan home in the district between the lower St. Lawrence and Hudson Bay. If we may judge from its cranial forms, its purest representatives were toward the east. The skulls of the Five Nations, as well as

those of the Tuscaroras and Cherokees, are distinctly dolichocephalic, and much alike in other respects, while those of the Hurons are brachycephalic.* Physically the stock is most superior, unsurpassed by any other on the continent, and I may even say by any other people in the world; for it stands on record that the five companies (500 men) recruited from the Iroquois of New York and Canada during our civil war stood first on the list among all the recruits of our army for height, vigor and corporeal symmetry.

In intelligence also their position must be placed among the highest. It was manifested less in their culture than in their system of government. About the middle of the fifteenth century the Onondaga chief, Hiawatha, succeeded in completing the famous league which bound together his nation with the Mohawks, Oneidas, Senecas and Cayugas into one federation of offense and defence. "The system he devised was to be not a loose and transitory league, but a permanent government. While each nation was to retain its own council and management of local affairs, the general control was to be lodged in a federal senate, composed of representatives to be elected by each nation, holding office during good behavior and acknowledged as ruling chiefs throughout the whole confederacy. Still further, and more remarkably, the federation was not to be a limited one. It was to be indefinitely expansible. The

*J. Aitken Meigs, "Cranial Forms of the American Aborigines," in *Proceedings of the Acad. of Nat. Sciences of Philadelphia*, May, 1866.

avowed design of its proposer was *to abolish war altogether.*"*

Certainly this scheme was one of the most far-sighted, and in its aim beneficent, which any statesman has ever designed for man. With the Iroquois it worked well. They included in the league portions of the Neutral nation and the Tuscaroras, and for centuries it gave them the supremacy among all their neighbors. The league was primarily based upon or at least drew much of its strength from the system of gentes; this prevailed both among the Iroquois and Cherokees, descent being traced in the female line. Indeed, it was from a study of the Iroquois system that the late Mr. Morgan formed his theory that ancient society everywhere passed through a similar stage in attaining civilization.

It is consonant with their advanced sentiments that among the Iroquois, women had more than ordinary respect. They were represented by a special speaker in the councils of the tribe, and were authorized to conduct negotiations looking towards making peace with an enemy. Among the Conestogas we have the instance of a woman being the recognized "Queen" of the tribe. With the Wyandots, the council of each gens was composed exclusively of women. They alone elected the chief of the gens, who represented its interests in the council of the tribe.†

*Horatio Hale, *The Iroquois Book of Rites*, pp. 21, 22. (Philadelphia, 1883. Vol. II. of Brinton's *Library of Aboriginal American Literature*.)

†J. W. Powell, *First Report of the Bureau of Ethnology*, p. 61. (Washington, 1881.)

In sundry other respects they displayed an intelligent activity. In many localities they were agricultural, cultivating maize, beans and tobacco, building large communal houses of logs, fortifying their villages with palisades, and making excellent large canoes of birch bark. According to traditions, which are supported by recent archæological researches, the Cherokees when they were upon the Kanawha and Ohio had large fields under cultivation, and erected mounds as sites for their houses and for burial purposes. When first encountered in east Tennessee they constructed long communal houses like the Five Nations, had large fields of corn, built excellent canoes and manufactured pottery of superior style and finish. Although no method of recording thought had acquired any development among the Iroquois, they had many legends, myths and formal harangues which they handed down with great minuteness from generation to generation. In remembering them they were aided by the wampum belts and strings, which served by the arrangement and design of the beads to fix certain facts and expressions in their minds. One of the most remarkable of these ancient chants has been edited with a translation and copious notes by Horatio Hale.* The Cherokees had a similar national song which was repeated solemnly each year at the period of the green corn dance. Fragments of it have been obtained quite recently.

The Iroquois myths refer to the struggle of the first two brothers, the dark twin and the white, a familiar symbolism in which we see the personification of the

* *The Iroquois Book of Rites*, referred to above.

light and darkness, and the struggle of day and night.

IROQUOIS LINGUISTIC STOCK.

Andastes, see *Conestogas*.

Cayugas, south of Lake Ontario.

Cherokees, on upper Tennessee river.

Conestogas, on lower Susquehanna.

Eries, south of Lake Erie.

Hurons, see *Wyandots*.

Mohawks, on Lakes George and Champlain.

Neutral Nation, west of the Niagara river.

Oneidas, south of Lake Ontario.

Onondagas, south of Lake Ontario.

Senecas, south of Lake Ontario.

Susquehannocks, on lower Susquehanna.

Tuscaroras, in Virginia.

Wyandots, between Lakes Ontario and Huron.

6. THE CHAHTA-MUSKOKIS.

The various nations who are classed under the Muskoki stock occupied the broad and pleasant lowlands stretching from the terminal hills of the Appalachian Mountains to the Gulf of Mexico, and from the Atlantic to the Mississippi, and even beyond that mighty barrier. The remains of a few other stocks in the eastern portion of this area indicate that the Muskokis were not its original occupants, and this was also their own opinion. Their legends referred to the west and the north-west as the direction whence their ancestors had wandered; and the Choctaw legend which speaks of *Nani Waya*, the Bending Mount, a large artificial mound in Winston county, Mississippi, as the locality where their first parents saw the light, is explained by another which

describes it as the scene of their separation from the Chickasaws.

Of the main division of the stock, the Choctaws lived furthest west, bordering upon the Mississippi, the Chickasaws in the centre, and the Creeks on the Atlantic slope. The Seminoles were a branch of the latter, who, in the last century, moved into Florida; but it is probable that the whole of the west coast of that peninsula was under the control of the Creeks from the earliest period of which we have any knowledge of it.

The various members of this stock presented much diversity in appearance. The Creeks were tall and slender, the Chickasaws short and heavy; the skulls of both have a tendency to dolichocephaly, but with marked exceptions, and the custom among many of them to deform the head artificially in various ways adds to the difficulties of the craniologist.* The color of all is called a dark cinnamon.

The gentile system with descent in the female line prevailed everywhere. The Creeks counted more than twenty gentes, the Choctaws and Chickasaws about twelve, united in phratries of four. In the towns each gens lived in a quarter by itself, and marriage within the gens was strictly prohibited. Each had its own burying place and sepulchral mound where the bones of the deceased were deposited after they had been cleaned. The chief of each town was elected for life from a certain gens, but the

* There are twenty-one skulls alleged to be of Muskoki origin in the Academy of Natural Sciences, Philadelphia, of which fifteen have a cephalic index below 80.

office was virtually hereditary, as it passed to his nephew on his wife's side unless there were cogent reasons against it. The chief, or *miko*, as he was called, ruled with the aid of a council, and together they appointed the "war chief," who obtained the post solely on the ground of merit. Instances of a woman occupying the position of head chief were not unknown, and seem to have been recalled with pleasure by the tribe.*

The early culture of these tribes is faithfully depicted in the records of the campaign of Hernando De Soto, who journeyed through their country in 1540. He found them cultivating extensive fields of maize, beans, squashes and tobacco; dwelling in permanent towns with well-constructed wooden edifices, many of which were situated on high mounds of artificial construction, and using for weapons and utensils stone implements of great beauty of workmanship. The descriptions of later travellers and the antiquities still existing prove that these accounts were not exaggerated. The early Muskokis were in the highest culture of the stone age; nor were they deficient wholly in metals. They obtained gold from the auriferous sands of the Nacoochee and other streams, and many beautiful specimens of their ornaments in it are still to be seen.

Their artistic development was strikingly similar to that of the "mound-builders" who have left such interesting remains in the Ohio valley; and there is, to say the least, a strong probability that they are the

* Examples given by William Bartram in his MSS. in the Pennsylvania Historical Society.

descendants of the constructors of those ancient works, driven to the south by the irruptions of the wild tribes of the north.* Even in the last century they built solid structures of beams fastened to upright supports, plastered on the outside, and in the interior divided into a number of rooms. The art of picture-writing was not unknown to them, and some years ago I published their remarkable "national legend," read off from its hieroglyphics painted on a skin by their chief Chekilli in 1731.†

The religious rites of the Creeks were so elaborate that they attracted early attention, and we have quite full accounts of them. They were connected with the worship of the principle of fertility, the chief celebration, called the *busk* (*puskita*, fast), being solemnized when the young corn became edible. In connection with this was the use of the "black drink," a decoction of the *Iris versicolor*, and the maintenance of the perpetual fire. Their chief divinity was referred to as the "master of breath" or of life, and there was a developed symbolism of colors, white representing peaceful and pleasant ideas; red, those of war and danger. The few Seminoles who still survive in the southern extremity of the peninsula of Florida, continue the ceremonies of the green corn dance and black drink, though their

* See on this subject an essay on "The Probable Nationality of the Mound-Builders," in my *Essays of an Americanist*, p. 67. (Philadelphia, 1890.)

† D. G. Brinton, "The National Legend of the Chahta-Muskoki Tribes," in *The Historical Magazine*, February, 1870. (Republished in Vol. IV. of Brinton's *Library of Aboriginal American Literature*.)

mythology in general has become deeply tinged with half-understood Christian teachings.*

THE MUSKOKI LINGUISTIC STOCK.

Apalaches, on Apalache Bay.

Chickasaws, head waters of Mobile river.

Choctaws, between the Mobile and Mississippi rivers.

Coshattas, on the Red river.

Creeks, see *Muskokis*.

Hitchitees, sub-tribe of Creeks.

Muskokis, between Mobile and Savannah rivers.

Seminoles, in Florida.

Yamassees, around Port Royal Bay, South Carolina.

5. THE CATAWBAS, YUCHIS, TIMUCUAS, NATCHEZ, CHETIMACHAS, TONICAS, ADAIZE, ATAKAPAS, ETC.

Within the horizon of the Muskoki stock were a number of small tribes speaking languages totally different. We may reasonably suppose them to have been the débris of the ancient population who held the land before the Muskokis had descended upon it from the north and west. The *Catawbas* in the area of North and South Carolina were one of these, and in former times are said to have had a wide extension. South of them was the interesting tribe of the *Yuchis*. When first heard of they were on both banks of the Savannah River, but later moved to the Chatahuche. They call themselves "Children of the Sun," which orb they regard as a female and their mother. Their gentes are the same as those of the Creeks, and are evidently borrowed from them. Descent is counted in the female line. Women are held in honor, and

* "The Seminole Indians of Florida," by Clay MacCauley, in *Annual Report of the Bureau of Ethnology*, 1883-4.

when De Soto first met them, they were governed by a queen.*

Some of both these tribes still survive; but this is not the case with the *Timucuas*, who occupied the valley of the St. John river, Florida, and its tributaries, and the Atlantic coast as far North as the St. Mary river. They have been extinct for a century, but we have preserved some doctrinal works written in their tongue by Spanish missionaries in the seventeenth century, so we gain an insight into their language.† It is an independent stock.

Near the Choctaws were the *Natchez*, not far from the present city of that name. An account of them has been preserved by the early French settlers of Louisiana. They were devoted sun-worshippers and their chief was called "The Sun," and regarded as the earthly representative of the orb. They constructed artificial mounds, upon which they erected temples and houses, and were celebrated for their skill in weaving fabrics from the inner bark of the mulberry tree and for their fine pottery. In their religious rites they maintained a perpetual fire, and were accustomed to sacrifice captives to their gods, and the wives of their chieftain at his death.

The *Taensas* were a branch of the *Natchez* on the

* See for the Yuchis, their myths and language, Gatschet in *Science*, 1885, p. 253.

† *Arte de la Lengua Timuquana*, compuesto en 1614 per el Pe Francisco Pareja. Reprint by Lucien Adam and Julien Vinson, Paris, 1886. An analytical study of the language has been published by Raoul de la Grasserie in the *Compte Rendu du Congrès International des Américanistes*, 1888.

other bank of the Mississippi. Attention has been drawn to them of late years by the attempt of a young seminarist in France to foist upon scholars a language of his own manufacture which he had christened *Taensa*, and claimed to have derived from these people.* The Natchez language contains many words from the Muskoki dialects, but is radically dissimilar from it.† A few of the nation still preserve it in Indian Territory.

The *Chetimachas* lived on the banks of Grand Lake and Grand river, and were but a small tribe. They are said to have been strictly monogamous, and to have had female chieftains. Their chief deity was Kut-Kähänsh, the Noon-day Sun, in whose honor they held sacred dances at each new moon.

The *Tonicas* are frequently mentioned in the early French accounts of the colony of Louisiana. They lived in what is now Avoyelles parish, and were staunch friends of the European immigrants. Their language is an independent stock, and has some unusual features in American tongues, such as a masculine and feminine gender of nouns and a dual in three pronouns.

The *Adaize* or Atai were a small tribe who once lived between Saline river and Natchitoché, La. They spoke a vocalic language, differing from any other, though including a number of Caddo words, which was owing to their having been a member of the Caddo confederacy.

*See "The Curious Hoax of the Taensa Language" in my *Essays of an Americanist*, p. 452.

† D. G. Brinton, "The Language of the Natchez," in *Proceedings of the American Philosophical Society*, 1873.

The *Atakapas* had their hunting grounds about Vermilion river and the adjacent Gulf coast. Their name in Choctaw means "man-eaters," both they and their neighbors along the Texan coast having an ugly reputation as cannibals, differing in this from the Muskokis and their neighbors east of the Mississippi, among whom we have no record of anthropophagy, even of a ritual character. The later generations of Atakapas have been peaceful and industrious. Their language, though in the main quite alone, presents a limited number of words evidently from the same roots as their correspondents in the Uto-Aztec family.

The coast of Texas, between the mouths of the Colorado and Nueces rivers, was the home of the *Carankaways*. The Spaniards gave them a very black character as merciless cannibals, impossible to reduce or convert; but the French and English settlers speak of them in better terms. In appearance they were tall and strong, with low foreheads, hooked noses, prominent cheek bones, tattooed skins, and wore their black hair long and tangled. The older writers affirm that they spoke Atakapa, and were a branch of that tribe; but the scanty material of their idiom which we possess seems to place them in a stock by themselves.

The *Tonkaways* are a small tribe who lived in northwest Texas, speaking a tongue without known relationship. A curious feature of their mythology is the deification of the wolf. They speak of this animal as their common ancestor, and at certain seasons hold wolf dances in his honor, at which they

dress themselves in wolf skins and howl and run in imitation of their mythical ancestor and patron. A branch of them, the Arrenamuses, is said to have dwelt considerably to the south of the main body, near the mouth of the San Antonio river.

The lower Rio Grande del Norte was peopled on both its banks by a stock which was christened by Orozco y Berra the *Coahuiltecan*, but which Pimentel preferred to call the Texan. The latter is too wide a word, so I retain the former. There is not much material for the study of its dialects, so we are left in the dark as to the relationship of many tribes resident in that region. They were small in size and rich in names. Adolph Uhde gives the appellations and locations of seventy-four, based on previous works and personal observations.* The missionary Garcia, in his *Manual of the Sacraments*, published in the last century, names seventeen tribes speaking dialects of the tongue he employs, which appears to be a branch of the Coahuiltecan.†

* *Die Länder am untern Rio Bravo del Norte*. S. 120, sqq. (Heidelberg, 1861.) I give the following words from his vocabulary of the Carrizos :

Man, <i>nâ</i> .	One, <i>pequeten</i> .
Woman, <i>estoc, kem</i> .	Two, <i>acequeten</i> .
Sun, <i>al</i> .	Three, <i>guiye</i> .
Moon, <i>kan</i> .	Four, <i>naiye</i> .
Fire, <i>len</i> .	Five, <i>maguele</i> .

The numbers three, four and five are plainly the Nahuatl *yey, nahui, macuilli*, borrowed from their Uto-Aztecan neighbors.

† Bartolomé Garcia, *Manuel para administrar los Santos Sacramentos*. (Mexico, 1760). It was written especially for the tribes about the mission of San Antonio in Texas.

It is useless to repeat the long list, the more so as the bands were unimportant and have long since become extinct, with a few exceptions. They were in a savage condition, roving, and depending on hunting and fishing. The following appear to have been the principal members of the

COAHUILTECAN LINGUISTIC STOCK.

Alazapas, near Monclova.

Cacalotes, on the left bank of the Rio Grande.

Catajanos or *Cartujanos*, near Monclova.

Carrizos, near Monclova.

Coaquilenes, near Monclova.

Cotonames, left bank of Rio Grande.

Comecrudos, near Reynosa.

Orejones, near San Antonio de Bejar.

Pacaos or *Pakawas*, near San Antonio.

Among the extinct dialects of Tamaulipas was the *Maratin*, which at one time had considerable extension. The only monument which has been preserved of it is a wild song, in which the natives celebrated all too early their victories over the Spaniards. The text contains several Nahuatl words, but the body of the roots appear to have been drawn from some other source.* Uhde locates the Maratins near Soto la Marina and along the Gulf between the Rio Panuco and the Rio Grande.†

* As *chiquat*, woman, Nah. *cihuatl*; *baah-ka*, to drink, Nah. *paitia*. The song is given, with several obvious errors, in Pimentel, *Lenguas Indigenas de Mexico*, Tom. III., p. 564; Orozco y Berra's lists mentions only the Aratines, *Geografia de las Lenguas de Mexico*, p. 295.

† Adolph Uhde, *Die Länder am untern Rio Bravo del Norte*, p. 120.

6. THE PAWNEES (CADDOES).

The Pani* stock was scattered irregularly from the Middle Missouri River to the Gulf of Mexico. The Pawnees proper occupied the territory from the Niobrara River south to the Arkansas. The Arikari branch had separated and migrated to the North at a comparatively recent period, while the Wichitas, Caddoes and Huecos roamed over Eastern Louisiana and Western Texas. The earliest traditions of all these peoples assign their priscan home toward the south, and the Pawnees remembered having driven the Dakota tribes from the hunting grounds of the Platte Basin.

The stock as a rule had an excellent physique, being tall and robust, with well-proportioned features, the lips thin and the eyes small. Longevity however was rare, and few of either sex reached the age of sixty. The division of the tribes was into bands and these into totems, but the gentile system did not prevail with much strength among them. The chieftanship of the bands was hereditary in the male line, and the power of the chief was almost absolute. He was surrounded by a body of retainers whom he supported, and who carried out his orders. When he wished a council these messengers carried the summons. Property as well as power passed to

*The name Pani is not a word of contempt from the Algonkin language, as has often been stated, but is from the tongue of the people itself. *Pariki* means a horn, in the Arikari dialect *uriki*, and refers to their peculiar scalp-lock, dressed to stand erect and curve slightly backward, like a horn. From these two words came the English forms Pawnee and Arikaree. (Dunbar.)

the family of the male, and widows were often deprived of everything and left in destitution. Marriage was a strictly commercial transaction, the woman being bought from her parents. The purchase effected, the bridegroom had a right to espouse all the younger sisters of his wife as they grew to maturity, if he felt so inclined. The laxity of the marriage rules of the stock was carried to its limit by the Arikaris, among whom it is said fathers united with their daughters and brothers with their sisters, without offending the moral sense of the community. This may have arisen after corruption by the whites.

Agriculture among them was more in favor than generally on the plains. Maize, pumpkins and squashes were cultivated, each family having its own field two or three acres in extent. For about four months of the year they were sedentary, dwelling in houses built of poles and bark covered with sods, while the remainder of the time they wandered over their hunting grounds, carrying with them tents of skins which were stretched on poles. The women manufactured a rude pottery and the men implements and weapons of wood and stone. The Arikaris were skilled in the construction of boats of skin stretched over wooden frames, an art they may have learned from the Mandans.

The information about their religion is vague, but it seems in some respects to have resembled that of the Mexican nations. One of their chief divinities was the morning star, *Opirikut*, which was supposed to represent the deity of fertility and agriculture. At the time of corn-planting a young girl, usually a cap-

tive, was sacrificed to this divinity. The victim was bound to a stake and partly burned alive; but before life had ceased, her breast was cut open, her heart torn out and flung in the flames. Her flesh was then cut into small pieces and buried in the cornfield. This was believed to secure an abundant crop. The similarity of the rite to that in vogue among the Mexicans, who also worshipped the morning star as the goddess of fertility, is interesting.

The dead were buried with their possessions, and the customs of mourning continued sometimes for years.*

PANI LINGUISTIC STOCK.

Anaddakkas, on left bank of Sabine river.

Arikaris, on the middle Missouri.

Assinais, in central Texas.

Caddoes, near Clear Lake, La.

Cenis, see *Assinais*.

Huecos, on the upper Brazos river.

Innies, see *Texas*.

Nachitoches, on upper Red river.

Natacos, see *Anaddakkas*.

Pawnees, between Niobrara and Arkansas rivers.

Tawakonies, on upper Leon river.

Texas, on upper Sabine river and branches.

Towachies, see *Pawnees*.

Wichitas, on north bank of Red river.

Yatasses, on Stony creek, an affluent of Red river.

* The authorities on the Panis are John B. Dunbar, in the *Magazine of American History*, 1888; Hayden, *Indian Tribes of the Missouri Valley* (Philadelphia, 1862), and various government reports.

7. THE DAKOTAS (SIOUX).

The western water-shed of the Mississippi river was largely in the possession of the Dakota or Sioux stock. Its various tribes extended in an unbroken line from the Arkansas river on the south to the Saskatchewan on the north, populating the whole of the Missouri valley as far up as the Yellowstone. Their principal tribes in the south were the Quapaws, Kansas and Osages; in the central region the Poncas, Omahas and Mandans; to the north were the Sioux, Assiniboin and Crows; while about Green Bay on Lake Michigan lived the Winnebagoes.

The opinion was formerly entertained that this great family moved to the locations where they were first met from some western home; but the researches of modern students have refuted this. Mr. Dorsey has shown by an analysis of their most ancient traditions that they unanimously point to an eastern origin, and that the central and southern bands did not probably cross the Mississippi much before the fourteenth century.* This is singularly supported by the discovery of Mr. Horatio Hale that the Tuteloës of Virginia were a branch of the Dakotas; and further, the investigations of Catlin among the Mandans resulted in showing that this nation reached the Missouri valley by travelling down the Ohio. They therefore formed a part of the great easterly migration of the North Atlantic tribes which seems to

* J. Owen Dorsey, "Migrations of Siouan Tribes," in the *American Naturalist*, 1886, p. 211. The numerous and profound studies of this stock by Mr. Dorsey must form the basis of all future investigation of its history and sociology.

have been going on for many centuries before the discovery. In the extreme south, almost on the gulf coast of Louisiana, lived some small bands of Dakotas, known as Biloxis, Opelousas, Pascagoulas, etc. They were long supposed to speak an independent tongue, and only of late years has their proper position been defined.

Their frames are powerful, and the warriors of the Sioux have long enjoyed a celebrity for their hardihood and daring. The massacre of General Custer's command, which they executed in 1876, was the severest blow the army of the United States ever experienced at the hands of the red man. With reference to cranial form they are dolichocephalic, sixteen out of twenty-three skulls in the collection of the Academy* offering a cephalic index under 80.

The northern Dakotas do not seem to have had the same system of gentes which prevailed in most of the eastern tribes. Mr. Morgan was of the opinion that it had existed, but had been lost; this, however, requires further proof. There are many societies among them, but not of the nature of clans. Their chiefs hold their position by hereditary descent in the male line, though among the Winnebagoes the early traveller, Carver, found the anomaly of a woman presiding over the tribe. The central bands, the Mandans and Minnetarees, recognized gentes with descent in the female line; while among the Poncas and Omahas there were also gentes, but with descent in the male line. The condition in this respect, of the members of this family, as also of that

* The Academy of Natural Sciences, Philadelphia.

of the Athabascan, seems to prove that the gentile system is by no means a fixed stadium of even American ancient society, but is variable, and present or absent as circumstances may dictate.

A few members of this family, notably the Mandans, attained a respectable degree of culture, becoming partly agricultural, and dwelling most of the year in permanent abodes; but the majority of them preferred depending on the bounties of nature, pursuing the herds of buffaloes over the boundless pastures of the plains, or snaring the abundant fish in the myriad streams which traversed their country.

The mythology of the Dakotas is concerned with the doings of giants in whom we recognize personifications of the winds and storms. One of these is Haokah, to whom the warrior sends up an invocation when about to undertake some perilous exploit. The thunder is caused by huge birds who flap their wings angrily and thus produce the portentous reverberations. The waters are the home of Unktahe, a mighty spirit who lurks in their depths. Indeed, to the Dakotas, and not to them alone, but to man in their stage of thought, "All nature is alive with gods. Every mountain, every tree is worshipped, and the commonest animals are the objects of adoration."*

DAKOTA LINGUISTIC STOCK.

Arkansas, on lower Arkansas river.

Assiniboins, on Saskatchewan and Assiniboin rivers.

Biloxis, in Rapides Parish, Louisiana.

* Mrs. Mary Eastman, *Dahcotah; or Life and Legends of the Sioux*, p. 211. (New York, 1849.)

Crows, on Yellowstone river.
Iowas, on the Iowa river.
Kansas, on the Kansas river.
Mandans, on the middle Missouri river.
Minetarees, on the Yellowstone river.
Ogallalas, sub-tribe of Sioux.
Omahas, on the Elkhorn river.
Osages, on Arkansas and Osage rivers.
Ottoes, on the Platte river.
Poncas, on the middle Missouri river.
Quapaws, on lower Arkansas river.
Sioux, on upper Mississippi and affluents.
Tetons, sub-tribe of Sioux.
Tuteloës, on upper Roanoke river, Va.
Winnebagoes, western shore of Lake Michigan.
Yanktons, on upper Iowa river.

8. THE KIOWAYS.

The upper basin of the Canadian branch of the Arkansas River was the home of the *Kioways*. At the middle of this century they were estimated to be over three thousand, all given to a wild hunting life over the great plains on which they lived. In close proximity to the Comanches and other tribes of Shoshonian lineage, their language presents many affinities to the Shoshonian stock, but not sufficient in the opinion of those who have examined both to justify classing them together as from a common source.

The Kioways are light in color, broad shouldered and strong armed, and for generations were the Arabs of the Great American Desert, depending on hunting and robbery for a subsistence. Their homes were light skin lodges, which they spread on poles about twelve feet long. With plenty of ponies and

without fixed habitations, it was easy for them to move rapidly over the Plains. According to their traditions they came originally from the North, from some cold country, where they had to walk on snow shoes, definitely located near the Black Hills, Dakota, where they were associated with the Apaches. They were idol worshippers, their priesthood consisting of ten medicine-men. The dead were buried in deep graves. At present they have been reduced to about one thousand souls.*

* W. P. Clark, *Indian Sign Language*, p. 229 (Philadelphia, 1885); Whipple, Ewbank and Turner, *Report on Indian Tribes*, pp. 28, 80. (Washington, 1855.)

II. THE NORTH PACIFIC GROUP.

I. THE NORTHWEST COAST AND CALIFORNIAN TRIBES.

THE lofty chains of the Rocky Mountains extend from north to south, leaving a narrow coast line seamed with deep and fertile valleys along the Pacific from Mt. St. Elias to the Gulf of California. In spite of its great extent in latitude—from the 30th to the 60th degree—there is less difference in climate than one would suppose from analogy in any other part of the world. The warm ocean current which bathes the northern coast mitigates the cold of the winter to such an extent that the isothermal lines on the Pacific are fifteen degrees of latitude more northerly than on the Atlantic border of the continent.

A few of the eastern stocks, the Athabascan and the Shoshonian, have sent out colonies who have settled on the banks of the Pacific; but as a rule the tribes of the western coast are not connected with any east of the mountains. What is more singular, although they differ surprisingly among themselves in language, they have marked anthropologic similarities, physical and psychical. Virchow* has emphasized the fact that the skulls from the northern point

* R. Virchow, *Verhand. der Berliner Gesell. für Anthropologie*, 1889, s. 400.

of Vancouver's Island reveal an unmistakable analogy to those from the southern coast of California; and this is to a degree true of many intermediate points. Not that the crania have the same indices. On the contrary, they present great and constant difference within the same tribe;* but these differences are analogous one to the other, and on fixed lines.

There are many other physical similarities which mark the Pacific Indians and contrast them with those east of the mountains. The eyes are less oblique, the nose flatter, the lips fuller, the chin more pointed, the face wider. There is more hair on the face and in the axilla, and the difference between the sexes is much more obvious.†

The mental character is also in contrast. The Pacific tribes are more quiet, submissive and docile; they have less courage, and less of that untamable independence which is so constant a feature in the history of the Algonkins and Iroquois.

Beginning at the sixtieth degree of north latitude and extending to the fifty-fifth, are the *Tlinkit* or *Kolosch*. They dwell on the coast of Alaska and the adjacent islands. Physically they are a strong and often tall people, light in color, with black or slightly reddish hair, eyes horizontal, nose aquiline. The Russians spoke of them as the most intelligent tribe they encountered on the coast. They certainly seem

* Dr. Franz Boas, "Fourth Report on the Tribes of the North West Coast," in *Proceed. Brit. Assoc. Adv. Science*, 1887.

† Dr. J. L. Le Conte, "On the Distinctive Characteristics of the Indians of California," in *Trans. of the Amer. Assoc. for the Adv. of Science*, 1852, p. 379.

to have developed an uncommon appreciation of property, which is supposed to be a sign of a high order of intellect. Thus they have a gentile system with descent in the female line, but their aristocracy and the selection of their chiefs are entirely on a property basis. The richest obtain the highest places.

The Tlinkit villages are permanent, the houses solidly constructed of wood, sometimes with the additional protection of a palisade. The carving and painting upon them are elaborate, the subjects being caricatures of faces, men, and animal forms. The chiefs erect at one side of their doors carved and painted "totem posts," some of which are nearly fifty feet high. These are also found among the Haidahs and Tshimshians to the south. The arts are correspondingly developed. Seaworthy canoes are hewn from the trunks of the red cedar, hides are dressed and the leather worked into a variety of articles; lamps, mortars and utensils were chipped or ground out of stone, and they are handy in beating out ornaments of silver and copper. The Tlinkits have always been active merchants, and when the first navigators visited their villages in 1741, they were surprised to find them in possession of iron knives and other articles obtained by trade over East Cape or from the south. The usual currency were the dentalium shells found along the coast. One of the staple articles of trade were slaves, a custom not in existence on the Atlantic. They were bought from the neighboring tribes, and treated with great cruelty.

Tlinkit mythology is rich, having a coherent creation and deluge myth, the principal figure in which is *Jelchs*, the raven. He is the Promethean fire-bringer, and sets free the sun, moon and stars from their prisons. The religious rites are in the hands of priests (shamans), who as usual exert a great and injurious influence.*

The *Haidahs*, who dwell on Queen Charlotte Islands and Prince of Wales Archipelago, are probably a distant branch of the Tlinkit, though the affinity has not been clearly established, so they are officially classed as the *Skittagetan* stock, from the Skidegate dialect of the coast. In culture and appearance they resemble the Tlinkits, having similar mechanical skill. Their canoes and their intricate carvings, especially totem-posts and pipes of black slate, are celebrated products of the northwest coast.

The above and other tribes of British Columbia and Washington, the Tshimshian, the Kwakiutl, the Nootka, Salish, Chinook, etc., are so much alike physically that Dr. Boas, who has carried out the most recent and thorough examination of them, observes that no physical distinctions can be drawn between them.† In some the hair is slightly wavy; in others the nose is aquiline or flatter; the heads of several are artificially deformed, etc.; but these differences do not characterize whole stocks. All have a great respect for wealth, and consider its ac-

* Dr. Aurel Krause, *Die Tlinkit Indianer*. (Jena, 1885.)

† See the various reports of Dr. Boas to the British Association for the Advancement of Science, and the papers of Messrs. Tolmie and Dawson, published by the Canadian government.

cumulation the chief object of life. Among them all, women are honored for their chastity and industry, men for their skill in hunting and fishing, and for their bravery in war. Their character is generally sombre, and vanity and servility are prominent faults. The animal totemic system generally prevails, the child among the Salish and Kwakiutl following the father's gens. The communities are divided into social strata, as common people, middle class and chiefs. A favorite method to obtain popularity is to give a *potlatch*—a great feast, at which the host makes expensive presents to the guests, and thus becomes as it were their creditor to the amount of his disbursement.

The *Salish*, who are distinctively known as Flat-heads, though the custom of deforming the cranium is not confined to them, occupied a large tract in northern Washington and British Columbia.

The principal contribution of the Chinooks to modern life has been the "Chinook jargon" which has become the trade language of the coast. It is a curious medley of words, and has been recently made the subject of an interesting study by Mr. Horatio Hale.*

The *Sahaptins* or *Nez Percés*, with their affiliated tribes, occupied the middle and upper valley of the Columbia and its affluents, and also the passes of the mountains. They were in contiguity with the Shoshonees and the Algonkin Blackfeet, thus holding an important position, intermediate between the

* *A Manual of the Oregon Trade Language or Chinook Jargon.*
By Horatio Hale. (London, 1890.)

eastern and the Pacific tribes. Having the commercial instinct of the latter, they made good use of it, and every summer carried the various products of the coast, as shells, carved pipes, hammered copper, etc., far down the Missouri, where they exchanged them for the wares of the tribes there situate.

Of the numerous other linguistic stocks on the coast it will be sufficient for me to append the classification adopted by the Bureau of Ethnology at Washington.

NORTH PACIFIC COAST STOCKS.

(From north to south.)

Tlinkit or *Koloschan*, in southern Alaska.

Haidah or *Skittagetan*, on Queen Charlotte Islands.

Dialects—Masset, Skidegate, etc.

Tshimsian or *Chimmessyanian*, on Nass and Skeena rivers.

Dialects—Chimmessyan, Nasqua.

Kwakiootl or *Haeltzukian*, on Gardiner's Channel.

Dialects—Heiltsuk, Kwakiutl, Quaisla.

Nutka or *Wakashan*, on western coast of Vancouver Island.

Dialects—Aht, Nootka, Wakash.

Chinook or *Chinookan*, Columbia river to Dalles; Pacific coast to Shoalwater Bay; south to Tillamuk Head.

Salish, Admiralty Inlet to Spokane river.

Dialects—Bilcoola, Kawitschin, Lummi, Samie.

Chimakuan, Puget Sound, Port Townsend to Port Ludlow.

Kutenay or *Kitunahan*, head-waters of Columbia.

Sahaptin or *Sahaptanian*, middle affluents of Columbia.

Dialects—Klikatat, Nez Percé, Sahaptani, Wallawalla, Yakama.

Wayilaptu or *Wailaptuan*, near mouth of Wallawalla river.

Yakonan, coast of Oregon from Yaquina river to Umpqua river.

Kalapooian, on the Willamette river.

Kusan, about Coos Bay.

Palaihnihan or *Achomawi*, on Pit river.

Takilman, on upper Rogue river.

Sastean or *Shasta*, on upper Klamath river.

Lutuanian or *Modoc*, on Klamath Lake and Sprague river.

Quoratean or *Ehnek*, on lower Klamath river to junction of Trinity river.

Yukian, in Round Valley, California.

Yanan or *Nozi*, Lassen Butte and Round Mountain.

Pujunan or *Maidu*, east bank of Sacramento river.

Kulanapan or *Pomo*, Russian river and adjacent coast.

Copehan or *Wintun*, on Trinity river.

Weitspekan or *Rurok*, lower Klamath river from Trinity river down.

Chimarikan, on New river and Trinity river.

Wishoskan, on Humboldt Bay.

Mariposan or *Yokuts*, on Kings river and Tulare Lake.

Moquelumnian or *Mutsun*, on Tuolumne river.

Costanoan, north of San Francisco Bay to Monterey Bay.

Esselenian, Monterey Bay to San Lucia Mts.

Salinan, about San Antonio and San Miguel missions. Includes the Tatche or Telame.

Chumashan, at missions of San Buenaventura, Santa Barbara, Santa Inez, Purissima and San Luis Obispo.

2. THE YUMAS.

The valley of the Colorado River in Arizona, the peninsula of California and portions of the eastern shore of the Gulf of California, formed the home of the Yuma stock. They were found in these regions by Coronado as early as 1540, and own no traditions of having lived anywhere else. The considerable differences in their dialects within this comparatively small area indicates that a long period has elapsed since the stock settled in this locality and split up into hostile fractions.

It has also been called the Katchan or Cuchan stock, and the Apache, that being the Yuma word for "fighting men;" but we should confine the

term Apaches to the Tinneh (Athapascan) tribe so called, and to avoid confusion I shall dismiss the terms Apache-Yumas, Apache-Tontos and Apache-Mohaves, employed by some writers. The Yumas, from whom the stock derives its name, lived near the mouth of the Colorado River. Above them, on both banks of the river, were the Mohaves, and further up, principally on Virgin River, were the Yavapai.

Most of the Yumas are of good stature, the adult males averaging five feet nine inches high, well built and vigorous. The color varies from a dark to a light mahogany; the hair is straight and coarse, the eyes horizontal, the mouth large, and the lips heavy. The skull is generally brachycephalic, but there are a number of cases of extreme dolichocephaly (68).*

Animal totems with descent in the male line prevailed among the Yumas, though they seem for a long time not to have regarded these matters closely. In culture they vary considerably. The Seris or Ceris, who formerly lived in the hills near Horcasitas, but in 1779 were removed to the island of Tiburon, are described as thieves and vagrants, lazy and wretched. They were exceedingly troublesome to the Mexican Government, having revolted over forty times. The boats they use are of a peculiar construction, consisting of rushes tied together. As weapons up to recent years they preferred the bow and arrow, and upon the arrow laid some kind of

*Dr. W. F. Corbusier, in *American Antiquarian*, 1886, p. 276; Dr. Ten Kate, in *Verhand. der Berliner Gesell. für Anthropol.*, 1889, s. 667.

poison which prevented the wounds from healing. Their dialect, which is harsh, is related especially to the western branch of the Yuma stem. They are described as light in color and some of them good-looking, but filthy in habits.*

The Yumas and Maricopas were agricultural, cultivating large fields of corn and beans, and irrigating their plantations by trenches. It is highly probable that formerly some of them dwelt in adobe houses of the pueblo character, and were the authors of some of the numerous ruined structures seen in southern Arizona. The pottery and basket work turned out by their women are superior in style and finish. A few years ago the Mohaves of the west bank lived in holes in the earth covered with brush, or in small wattled conical huts. For clothing they wore strips of cottonwood bark, or knotted grass. Tattooing and painting the person in divers colors were common. The favorite ornament was shells, arranged on strings, or engraved and suspended to the neck. The chiefs wore elaborate feather head-dresses.†

The Tontos, so-called from their reputation for stupidity, are largely mixed with Tinné blood, their women having been captured from the Apaches. Though savage, they are by no means dull, and are considered uncommonly adept thieves.

Quite to the south, in the mountains of Oaxaca and

*J. R. Bartlett, *Explorations in New Mexico*, Vol. I., p. 464. C. A. Pajeken, *Reise-Erinnerungen in ethnographischen Bildern*, s. 97.

† Whipple, Ewbank and Turner, *Report on Indian Tribes* (Washington, 1855), and numerous later authorities, give full information about the Yumas.

Guerrero, the Tequistlatecas, usually known by the meaningless term Chontales, belong to this stem, judging from the imperfect vocabularies which have been published.

The peninsula of California was inhabited by several Yuma tribes differing in dialect but much alike in culture, all being on its lowest stage. Wholly unacquainted with metals, without agriculture of any kind, naked, and constructing no sort of permanent shelters, they depended on fishing, hunting and natural products for subsistence. Their weapons were the bow and the lance, which they pointed with sharpened stones. Canoes were unknown, and what little they did in navigation was upon rafts of reeds and brush.

Marriages among them were by individual preference, and are said not to have respected the limits of consanguinity; but this is doubtful, as we are also told that the mother-in-law was treated with peculiar ceremony. Their rites for the dead indicate a belief in the survival of the individual. The body was buried and after a certain time the bones were cleaned, painted red, and preserved in ossuaries.

The population was sparse, probably not more than ten thousand on the whole peninsula. At the extreme south were the Pericus, who extended to N. Lat. 24°; beyond these lived the Guaicurus to about Lat. 26°; and in the northern portion of the peninsula to latitude 33° the Cochimis.* The early writers state that in appearance these bands did not differ

*Jacob Baegert, *Nachricht von den Amerikanischen Halbinsel Californien*. (Mannheim, 1773.)

from the Mexicans on the other side of the Gulf. Their skulls, however, which have been collected principally from the district of the Pericus, present a peculiar degree of elongation and height (dolichocephalic and hypsistenocephalic).

YUMA LINGUISTIC STOCK.

- Ceris*, on Tiburon Island and the adjacent coast.
- Cochimis*, northern portion of Californian peninsula.
- Cocopas*, at mouth of Colorado river.
- Coco-Maricopas*, on middle Gila river.
- Comeyas*, between lower Colorado and the Pacific.
- Coninos*, on Cataract creek, branch of the Colorado.
- Cuchanes*, see *Yumas*.
- Diegueños*, near San Diego on the Pacific.
- Gohunes*, on Rio Salado and Rio Verde.
- Guaicurus*, middle portion of Californian peninsula.
- Hualapais*, from lower Colorado to Black Mountains.
- Maricopas*, see *Coco-Maricopas*.
- Mohaves*, on both banks of lower Colorado.
- Pericus*, southern extremity of Californian peninsula.
- Tontos*, in Tonto basin and in the Pinal mountains.
- Tequistlatecas*, of Oaxaca and Guerrero.
- Yavipais*, west of Prescott, Arizona.
- Yumas*, near mouth of Colorado river.*

3. THE PUEBLO TRIBES.

The word *pueblo* in Spanish means simply "town;" but in American ethnography it has obtained a special signification from the aboriginal structures so-called, whose remains are found in profusion in Arizona and the neighboring localities over an area

* I have not included in the stock the so-called M'Mat stem, introduced erroneously by Mr. Gatschet, as Dr. Ten Kate has shown no such branch exists. See *Verhandlungen der Berliner Anthropol. Gesell.*, 1889, ss. 666-7.

about 350 miles from east to west and 300 miles from north to south.* These are buildings several stories in height, either of stone or of adobes, communal in character, that is, intended to accomodate a whole gens or clan, and usually with certain peculiarities of finish and plan. The adobes are generally large, some four feet long by two feet wide, and were often made upon the wall itself, the clay or gravel being carried in a moist state in baskets of this size and deposited upon the wall till the mass dried. When stones are employed, they are held together by a mud mortar. The most celebrated of these adobe edifices are perhaps the Casas Grandes in the valley of the San Miguel river, in northern Chihuahua. They have frequently been described and do not differ except in size from hundreds of other ruins in the Gila basin.

In connection with the pueblos stand the "cliff-houses," structures of stones usually carefully squared and laid in mortar, found in great numbers and over an area of wide extent in the deep gorges or cañons of the Colorado, the Gila and the upper Rio Grande, and their numberless affluents. They are perched upon the ledges of the precipices, which often descend almost perpendicularly for thousands of feet, and access to many of them could have been only by ladders or ropes. Prominent points are frequently surmounted by round or square stone towers, evi-

*Mr. E. A. Barber estimates that the area in which the characteristic remains of the cliff-dwellers and pueblos are found contains 200,000 square miles. *Compte Rendu du Congrès des Américanistes*, 1878, Tome I., p. 25.

dently for purposes of observation. The disposition of the cliff houses renders it certain that their plans and positions were selected with a view to make them safe retreats from marauding enemies.

As descriptions of these interesting ruins have often been introduced to support vague and extraordinary theories concerning ancient America, I would emphatically say there is nothing in any of the remains of the pueblos, or the cliff houses, or any other antiquities in that portion of our continent, which compels us to seek other constructors for them than the ancestors of the various tribes which were found on the spot by the Spaniards in the sixteenth century, and by the armies of the United States in the middle of the nineteenth. This opinion is in accordance with history, with the traditions of the tribes themselves, and with the condition of culture in which they were found. When, in 1735, Pedro de Aíza made an expedition from Santa Fé against the Náva-jos, he discovered tribes dwelling in stone houses, "built within the rocks," and guarded by watch-towers of stone.* The Apaches still remember driving these cliff-dwellers from their homes, and one of the Apache gentes is yet named from them "stone-house people."† As for the pueblos, seven or eight of them are occupied to-day by the same people who built them, and whose homes they have been for many centuries.

* "Casas y atalayas erigidas dentro de las peñas." I owe the quotation to Alphonse Pinart.

† The Tze-tinne; Capt. J. G. Bourke, in *Jour. Amer. Folk-lore*, 1890, p. 114.

It is a significant fact that these people do not all belong to the same stock. On the contrary, the "Pueblo Indians" are members of a number of wholly disconnected stems. This proves that the Pueblo civilization is not due to any one unusually gifted lineage, but was a local product, developed in independent tribes by the natural facilities offered by the locality. It is a spontaneous production of the soil, climate, and conditions, which were unusually favorable to agricultural and sedentary occupations, and prompted various tribes to adopt them.

Of these different peoples, those of the Moqui Pueblo belonged to the Shoshonee branch of the Uto-Aztec stock, and is the only existing Pueblo which is peopled by that wide-spread stem.* We have good reason to believe, however, that the Pimas of the Sonoran Group of the same stock once occupied a number of adobe Pueblos, and quite likely were the constructors of the Casas Grandes.

The natives of the remaining Pueblos belong to three independent stocks, known as the Kera, the Tehua, and the Zuñi families. No relationship has been discovered between either of these and any tribe outside the territory I have referred to.

The culture of the Pueblos, both ancient and modern, bears every mark of local and independent

*This affinity was first demonstrated by Buschmann in his *Spuren der aztekischen Sprache*, though Mr. Bandelier erroneously attributes it to later authority. See his very useful *Report of Investigations among the Indians of the South Western United States*, p. 116. (Cambridge, 1890.) Readers will find in these excellent reports abundant materials on the Pueblo Indians and their neighbors.

growth. A knowledge of metals, other than to a limited extent for ornament, is nowhere evident. Tillage of the fields in a rude manner was the main source of the food supply. Pottery of fine temper and in symmetrical forms was manufactured by the women. That they had any other domestic animal than a fowl, and sometimes a dog, has not been shown. Mats and clothing were woven of the fibres of bark and grass, and the culture of cotton was at one time common, especially among the Moquis and Pimas. The arts of weaving feathers and working shells into decorative objects are not yet lost. Apart from the development of the art of architecture, there was little in the culture of the Pueblo tribes to lift them above the level of the Algonkins. The acequias, or irrigation trenches, about which much has been written, were a necessity of their climate, and were in use among their southern neighbors in Sonora, and the Navajos.

LINGUISTIC STOCKS OF THE PUEBLOS.

KERA STOCK.	Pueblos of Kera or Queres, Cochiti, Laguna, Acoma, Silla, etc., on the upper Rio Grande, Jemez and San Juan rivers.
TEHUA STOCK.	<i>Jemez</i> , on the Jemez river. <i>Piros</i> , on Rio Grande and in Chihuahua. <i>Tanos</i> , near Albuquerque, New Mexico. <i>Taos</i> , at Taos Pueblo. <i>Tehuas</i> , at Tesuque and neighboring Pueblos.
ZUÑI STOCK.	At Zuñi Pueblo.

III. THE CENTRAL GROUP.

I. THE UTO-AZTECAN TRIBES.

OF all the stocks on the North American Continent, that which I call the *Uto-Aztecan* merits the closest study, on account of its wide extension and the high development of some of its members. Tribes speaking its dialects were found from the Isthmus of Panama to the banks of the Columbia river, and from the coast of the Pacific to the Gulf of Mexico. The relationship of these numerous bands is unquestionable, although many of them have freely adopted words from other stocks. This, however, will not surprise us if we recall that most of the Aryac languages of the old world owe about one third of their radicals to non-Aryac sources.

The principal members of this stock are the Utes, Shoshonees and Comanches in the north, various tribes in Sonora, Chihuahua, Sinaloa and Durango in the center, and the Nahuas or Aztecs in the south. It is not to be understood that the one of these derived its idioms from the other, but rather that at some remote epoch all three were offshoots from some one ancestral stem. This was at a period before the grammatical forms of the tongue had reached full development, and probably when it was in a

stage of isolation, with tendencies to suffix agglutination and incorporation. Since then the stages of growth which the several dialects have reached have been various. The one which far outstripped all others was the Nahuatl, which arrived at clear and harmonious sounds, fixed forms, and even some recognizable traces of inflection, though always retaining its incorporative character.

The establishment of the unity of this linguistic family we owe to the admirable labors of Joh. Carl Ed. Buschmann, who devoted years of patient investigation to examining the traces of the Nahuatl, or as he preferred to call it, the Aztec language, in Mexico and throughout the continent to the north. In spite of deficient materials, his sharp-sighted acumen discovered the relationship of the chief tongues of the group, and later investigations have amply confirmed his conclusions.*

Long before his day, however, the Spanish missionaries to the tribes of Sonora and Sinaloa had recognized their kinship to the Aztecs, and Father Ribas, in his history of the missions established by the Jesuits in Mexico, published in 1645, stated that the root-words and much of the grammar of all these dialects was substantially the same as those of the Nahuatl.†

*Buschmann, *Die Spuren der aztekischen Sprache im nördlichen Mexiko und höheren Amerikanischen Norden*. 4 to. Berlin, 1859, pp. 819.

Grammatik der Sonorischen Sprachen. 4 to. Berlin, Pt. I., 1864. pp. 266; Pt. II., 1867, pp. 215.

†Perez de Ribas, *Historia de los Triomphos de Nuestra Santa Fe*, Lib. I., cap. 19.

It is without doubt the most numerous stock now surviving. According to the census figures of the governments of the United States and Mexico for 1880, the numbers were as follows:*

Shoshonian group, including Pimas in U. S.	26,200
Sonoran group in Mexican Territory	84,000
Aztecan group	1,626,000

a. The Ute or Shoshonian Branch.

The northern, or Ute branch, which I so call from its most prominent member, includes the Shoshonees, Utes and Camanches, with their numerous sub-tribes and affiliated bands. They occupied at the beginning of this century an immense area, now included in south-eastern Oregon, Wyoming, Montana, Idaho, Nevada, parts of California, New Mexico and Arizona, northern and western Texas, and the states of Durango and Chihuahua in Mexico. Other names by which they are known in this area are Snakes, Bannocks, Moquis, etc. Everywhere their tongue is unmistakably the same. "Any one speaking the Shoshonee language may travel without difficulty among the wild tribes from Durango, in Mexico, to the banks of the Columbia River."† Their war parties scoured the country from the Black Hills of Dakota far into the interior of Mexico.

So far as can be ascertained, the course of migration of this group, like that of the whole stock, has been in a general southerly direction. The Comanche traditions state that about two hundred win-

* *Anales del Ministerio de Fomento*, p. 99. (Mexico, 1881.)

† Col. A. G. Brackett, in *Rep. of the Smithsonian Inst.* 1879, p. 329.

ters ago they lived as one people with the Shoshonees somewhere to the north of the head-waters of the Arkansas River.* This is borne out by similar traditions among the northern Shoshonees.† That very careful student, Mr. George Gibbs, from a review of all the indications, reached the conclusion that the whole group came originally from the east of the Rocky Mountain chain, and that the home of its ancestral horde was somewhere between these mountains and the Great Lakes.‡ This is the opinion I have also reached from an independent study of the subject, and I believe it is as near as we can get to the birth-place of this important stock.

This stock presents the extremes of both linguistic and physical development. No tongue on the continent was more cultured than the Nahuatl, and so were those who spoke it. The wretched root-digging Utes, on the other hand, present the lowest type of skulls anywhere found in America.|| The explanation is easy. It was owing to their lack of nutrition. Living on the arid plains of the interior, little better than deserts, they had for generations been half starved. They were not agricultural, but lived along the streams, catching fish, and making a poor bread from the seeds of the wild sun-flower and the chenopodium. Their houses were brush huts, or

* Capt. W. P. Clark, *The Indian Sign Language*, p. 118. (Philadelphia, 1885.)

† *Ibid.*, p. 338.

‡ See *Contributions to North American Ethnology*, Vol. I., p. 224. (Washington, 1877.)

|| R. Virchow, *Crania Ethnica Americana*.

lodges of dressed buffalo skins; and where the winters were cold, they dug holes in the ground in which they huddled in indescribable filth.

Very much superior to these are the Comanches. A generation or two ago they numbered about fifteen thousand, and were one of the most formidable nations of the west. Now they have diminished to that many hundreds, and live peaceably on reservations. They are tall (1.70) and well formed, the skull meso-cephalic, the eyes horizontal, the nose thin, the color light. Agriculture is not a favorite occupation, but they are more reasonable and willing to accept a civilized life than their neighbors, the Apaches or the Kioways. They had little government, and though polygamists, the women among them exercised considerable influence. Like the Utes, they are sun-worshippers, applying to that orb the term "father sun," *taab-apa*, and performing various dances and other rites in his honor. The serpent would seem also to come in for a share of their reverence, their tribal sign in the gesture speech of the plain being that for a snake,* and indeed they are often called Snake Indians. Not less interesting is it to find throughout all these tribes, Ute and Comanche, the deification of the coyote, which occupies so prominent a niche in the pantheon of the Aztec tribes and those who have borrowed from them. According to the Ute myths, the wolf and the coyote were the first two brothers from whom the race had its origin, and to the latter were attributed all the good things in the world.

*W. P. Clark, *The Indian Sign Language*, p. 118.

As we approach the southern border of the group, the stage of culture becomes higher. The natives of the Pueblo or Moqui, whose curious serpent-worship has been so well described by Captain Bourke,* are of this stock, and illustrate its capacity for developing a respectable civilization. The Kizh and Netela, who were attached to the mission of San Capistrano, were also Shoshonees.

b. The Sonoran Branch.

In the valley of the Gila river the Shoshonian and Sonoran branches of the Uto-Aztecan stock were in contact from time immemorial. The Sonoran branch begins on the north with the Pimas, who occupied the middle valley of the Gila, and the land south of it quite to the Rio Yaqui. I continue for it the name of *Sonoran* given by Buschmann, although it extended far beyond the bounds of that province.

The Pima tribe merits our special attention, because of the remarkable ruins and relics of a dense former population, sedentary and agricultural, in the region inhabited by it when the river basin was first explored. These are the large structures known as the Great Houses or Casas Grandes, and the remains of the numerous towns, extensive irrigating trenches, and ruined enclosures, brought to light by the Hemenway exploring expedition in the Salt river valley. Their walls were built of adobes or sun-dried bricks of large size, the clay probably placed in baskets upon the wall and allowed to dry there. The extent

* *The Snake Dance of the Moquis of Arizona.* By John G. Bourke. (New York, 1884.)

of these remains is surprising, and in the Salt river valley alone, in an area of half a million acres, it is estimated that two hundred thousand people may have found support. Making every allowance, there is no doubt that at some remote epoch the arable land in the valleys of the Gila and its affluents was under close cultivation.

Who these busy planters were has supplied material for much speculation. As usual, the simplest explanation has been the last to be welcomed. In fact, there is no occasion for us to look elsewhere than to the ancestors of these Pimas, who lived in the valley when the whites first traveled it. There is nothing in the ruins and relics which demands a higher culture than the Pimas possessed. There is no sign of a knowledge of metals beyond hammered copper; the structures are such as the Pueblo Indians of the same stock live in now; and the Pimas have a historic tradition which claims these ruins and these old fields as the work of their ancestors, from which they were driven by the repeated attacks of the Apaches and other savage tribes of the north.* Some of them, a sub-tribe called the Sobaypuris (Sabaguis), and doubtless many others, took refuge in the deep cañons and constructed along their precipitous sides those "cliff houses," which have been often described. About a hundred years ago the Apaches drove them out of these last resorts and forced them to flee to the

* For these legends see Captain F. E. Grossman, U. S. A., in *Report of the Smithsonian Institution*, pp. 407-10. They attribute the Casas Grandes to Sivano, a famous warrior, the direct descendant of Söhö, the hero of their flood myth.

main body of the Pimas in the south.* In conclusion, we may safely attribute most of the ruins in the Gila Basin, as well as most of the cliff houses in the various cañons, to these tribes of the Uto-Aztec stock. When the early missionaries reached the Pimas they found them in precisely the condition of culture of which we see the remains in the Salt River valley. Their houses were built of large adobes, sometimes roofed with tiles; they were agricultural and industrious; their fields were irrigated by like extensive canals or trenches, and their weapons, utensils and clothing were just such as the Hemenway expedition showed were those of the early accolents of the Gila and the Salado.†

Most of the other tribes of this group were, from the first knowledge we have of them, inclined to sedentary and agricultural lives. The Opatas, on the head waters of the Rio Yaqui, and the Tarahumaras, in the valleys of the Sierra Madre, are quiet, laborious peoples, who accepted without difficulty the teachings of the early missionaries. They cultivate the ground and build houses of adobes or of wood plastered.

The Tehuecos, Zuaques, Mayos and Yaquis are subtribes of the Cahitas, and speak a dialect the most akin of any to the Nahuatl. They are tall, vigorous men, active and laborious, trading in salt and

* The Apaches called them Tze-tinne, Stone House People. See Capt. John G. Bourke, *Journal of American Folk-Lore*, 1890, p. 114. The Apaches Tontos were the first to wander down the Little Colorado river.

† See the descriptions of the Nevomes (Pimas) in Perez de Ribas, *Historia de los Triunfos de Nuestra Santa Fe*, Lib. VI., cap. 2. (Madrid, 1645.)

woolen stuffs, cheerful, and much given to music. South of the Tarahumaras and immediately adjoining them, in the State of Chihuahua, are the Tepehuanas on the eastern slope of the Sierra Madre, from 25° to 27° latitude north. They are a people of unusual intelligence, of excellent memory, and when first met were living in solid houses of logs or of stone and clay, or as genuine troglodytes in artificial caves, and cultivating abundant crops of maize and cotton, which latter they wove and dyed with much skill.* The chroniclers speak of them as the most valiant of all the tribes of New Spain, but laborious and devoted to their fields.†

The tribe of the Sonoran group which reached the point furthest to the south was the Coras, who dwelt in the Sierra of Nayarit, in the State of Jalisco. From their location they are sometimes called Nayerits. They were a warlike but agricultural people, about the same level as the Tepehuanas.

The Tubares were a peaceable nation living in the Sierra of Sinaloa. They received the missionaries willingly and seem to have been an industrious tribe, their principal object of commerce being articles of clothing. It is said that they spoke two entirely distinct languages, one a dialect of Nahuatl, the other of un-

* "Las casas eran o de madera, y palos de monte, o de piedra y barro; y sus poblaciones unas rancherías, a modo de casilas." Ribas, *Historia de los Triunfos de Nuestra Santa Fe*, Lib. X., cap. 1. (Madrid, 1645.)

† Torquemada, *Monarquía Indiana*, Lib. V., cap. 44. An interesting sketch of the recent condition of these tribes is given by C. A. Pajeken, *Reise-Erinnerungen*, pp. 91-98. (Bremen, 1861.)

known affinities.* The Guazapares and the Varogios are described as living near the Tubares, on the headwaters of the Rio del Fuerte, and speaking the same or a similar dialect.†

In the defiles of the lofty range, which is sometimes called the Sierra de Topia, resided the Acaxees, Xiximes and other wild tribes, speaking related tongues. By some authorities they are alleged to belong to the Sonoran group, but as the material is lacking for comparison, their ethnographic position must be left undetermined.

The Guaymas, on the coast of the Gulf of California, south of the Ceris (a Yuma folk), have been ascertained by M. Pinart to speak a dialect allied to that of the southern Pimas, and are therefore to be added to this group. Another Pima dialect was the Bacorehui, spoken by the Batucaris and Comoparis on the lower Rio del Fuerte; as it was also that of the Ahomes, a distinctly Pima people.‡

The uniform tradition of all the tribes of this stock in Sonora and Sinaloa, so far as they were obtained by the early missionaries, was to the effect that their ancestors had migrated from localities further to the north.||

* Perez de Ribas, *Historia*, etc., Lib. II., cap. 33.

† Eustaquio Buelna, *Peregrinacion de los Aztecas y Nombres Geograficos Indigenas de Sinaloa*, p. 20. (Mexico, 1887.)

‡ Buelna, loc. cit., p. 21.

|| Father Perez de Ribas, who collected these traditions with care, reports this fact. *Historia de los Triunphos*, etc., Lib. I., cap. 19.

c. The Nahuatl Branch.

Under the term *Nahuas*, which has the excellent authority of Sahagun in its favor, I shall include all the tribes of the Uto-Aztecan stock who spoke the Nahuatl language, that called by Buschmann the Aztec, and often referred to as the Mexican. These tribes occupied the slope of the Pacific coast from about the Río del Fuerte in Sinaloa, N. lat. 26°, to the frontiers of Guatemala, except a portion at the isthmus of Tehuantepec. Beyond this line, they had colonies under the name of Pipiles on the coast of Guatemala, and in the interior the Alaguilacs. The Cuitlatecos, or Tecos, "dung-hill people," was a term of depreciation applied to those in Michoacan and Guerrero. On the borders of the lakes in the valley of Mexico were the three important states Tezcucó, Tlacopan and Tenochtitlan, who at the time of the conquest were formed into a confederacy of wide sway.

The last mentioned, Tenochtitlan, had its chief town where the city of Mexico now stands, and its inhabitants were the Azteca. East of the valley were the Tlascaltecs, an independent tribe; south of and along the shore of the gulf from Vera Cruz almost to the mouth of the Río de Grijalva, were Nahuatl tribes under the dominion of the confederacy. An isolated, but distinctly affiliated band, had wandered down to Nicaragua, where under the name Nicaraos they were found on the narrow strip of land between Lake Nicaragua and the Pacific, which they had conquered from tribes of Chapaneć lineage. The most distant of all were the Seguas, who at the time of the con-

quest resided in the Valle Coaza, on the Rio Telorio, and later moved to Chiriqui Lagoon. After the conquest they were scattered still further by the transportation of colonies of Tlascalans to Saltillo in the north, and to Isalco in San Salvador in the south.

I omit entirely from this group the Toltecs and the Chichimecs. These were never tribal designations, and it is impossible to identify them with any known communities. The Toltecs may have been one of the early and unimportant gentes of the Azteca, but even this is doubtful. The term was properly applied to the inhabitants of the small town of Tula, north of the valley of Mexico. In later story they were referred to as a mythical people of singular gifts and wide domain. Modern and uncritical writers have been misled by these tales, and have represented the Toltecs as a potent nation and ancestors of the Aztecs. There is no foundation for such statements, and they have no historic position.*

The term Chichimeca was applied to many barbarous hordes as a term of contempt, "dogs," "dog people."† It has no ethnic signification, and never

* See "The Toltecs and their Fabulous Empire," in my *Essays of an Americanist*, pp. 83-100.

† There is an interesting anonymous MS. in the *Fond Espagnol* of the Bibliotheque Nationale at Paris, with the title *La Guerra de los Chichimecas*. The writer explains the name as a generic term applied to any tribe without settled abode, "vagos, sin casa ni sementera." He instances the Pamis, the Guachichiles and the Guamaumas as Chichimeca, though speaking quite different languages.

had, but was used in much the same way as *Cuitlateca*, above referred to.*

The government of these states did not differ in principle from that of the northern tribes, though its development had reached a later stage. Descent was generally reckoned in the male line, and the male children of the deceased were regarded as the natural heirs both to his property and his dignities. Where the latter, however, belonged rather to the gens than the individual, a form of election was held, the children of the deceased being given the preference. In this sense, which was the usual limitation in America, many positions were hereditary, including that of the chieftancy of the tribe or confederation. The Montezuma who was the ruler who received Cortez, was the grandson of Axayacatl, who in turn was the son of the first Montezuma, each of whom exercised the chief power.

The land was held by the gens and allotted to its members for cultivation. Marriage was also an affair regulated by the gentile laws of consanguinity, but the position of woman was not specially inferior, and in the instance of the daughter of the first Montezuma, one seems to have occupied the position of head chief for a time.

The general condition of the arts in ancient Mexico is familiar to all who have turned their attention to American history. It has indeed received more than

* "*Cuitlatl*,=*mierda*" (Molina, *Vocabulario Mexicano*). *Cuitlatlan*, *Ort des Kothes* (Buschmann, *Aztekische Ortsnamen*, s. 621), applied to the region between Michoacan and the Pacific; also to a locality near Techan in the province of Guerrero (Orozco y Berra, *Geog. de las Lenguas*, p. 233.)

its due share of attention from the number and prominence of the Nahuas at the conquest. They were little if at all superior to many of their neighbors in cultural progress. Even in architecture, where they excelled, the Zapotecs, Totonacos and Tarascos were but little behind them. Numerous artificial pyramids and structures of hewn stone remain in the territories of all these to prove their skill as builders. The Mexicans may be said to have reached the age of bronze. Many weapons, utensils and implements, were manufactured of this alloy of copper and tin. Gold, silver, lead and copper, were likewise deftly worked by founding and smelting into objects of ornament or use. Lead was also known, but not utilized. The majority of implements continued to be of stone. They were fortunate in having for this purpose a most excellent material, obsidian, which volcanic product is abundant in Mexico. From it they flaked off arrow points, knives and scrapers, and by polishing worked it into labrets and mirrors. A variety of nephrite or jade was highly esteemed, and some of the most elaborate specimens of Mexican art in stone are in this hard, greenish material. Fragments of colored stones were set in mosaic, either as masks, knife handles or the like, with excellent effect.

With the undoubtedly dense population of many districts, the tillage of the ground was a necessary source of the food supply. The principal crop was as usual maize, but beans, peppers, gourds and fruit were also cultivated. Cotton was largely employed for clothing, being neatly woven and dyed in brilliant colors.

The religious rites were elaborate and prescribed with minuteness. Priests and priestesses were vowed to the cult of certain deities. Their duties consisted in sweeping and decorating the temples, in preparing the sacrifices, and in chanting at certain periods of the day and night. The offerings were usually of quails, rabbits or flowers, but especially in Tenochtitlan human sacrifices were not infrequent. The victims were slaves or captives taken in war. At times their flesh was distributed to the votaries, and was consumed as part of the ceremony; but as this was a rite, the Aztecs cannot be said to have been anthropophagous.

The priestly class had charge of the education of the youth of the better class. This was conducted with care and severity. Large buildings were set apart for the purpose, some for boys, others for girls. The boys were taught martial exercises, the history of the nation, the chants and dances of the religious worship, forms of salutation, the art of writing, etc. The girls were instructed in household duties, the preparation of food, the manufacture of garments, and the morals of domestic life.*

The literature which represented this education was large. It was preserved in books written upon parchment, or upon paper manufactured from the fibrous leaves of the maguey. This was furnished in great quantities from different parts of the realm, as much as 24,000 bundles being required by the gov-

* Dr. Gustav Brühl believes these schools were limited to those designed for warriors or the priesthood. Sahagun certainly assigns them a wider scope. See Brühl, *Die Culturvölker Alt-Amerikas*, pp. 337-8.

ernment annually as tribute. A book consisted of a strip of paper perhaps twenty feet long, folded like a screen into pages about six inches wide, on both sides of which were painted the hieroglyphic characters. These were partly ideographic, partly phonetic; the latter were upon the principle of the rebus, conveying the name or word by the representation of some object, the word for which had a similar sound. I have called this the *ikonomatic* method of writing, and have explained it in detail in several essays on the subject.*

Their calendar recognized the length of the year as 365 days. The mathematical difficulties in the way of a complete understanding of it have not yet been worked out, and it may have differed in the various tribes. Its elements were a common property of all the Nahua peoples, as well as many of their neighbors; which of them first devised it has not been ascertained.

UTO-AZTECAN LINGUISTIC STOCK.

a. Shoshonian Branch.

Bannacks, in Montana and southern Idaho.

Cahuillos, in southern California.

Chemehuevis, branch of Pi-utes, on Cottonwood Island.

Comanches, in northern Texas, on both banks of Rio Grande.

Kauvuyas, southern California, near the Pacific.

Kechis, in southern California, branch of Kauvuyas.

Kizh, in southern California, branch of Kauvuyas.

Moquis, in Moqui Pueblo, Arizona.

Netelas, in southern California.

Pa-Vants, south of Great Salt Lake.

* See "The Ikonomatic Method of Phonetic Writing" in my *Essays of an Americanist*, p. 213. (Philadelphia, 1890.)

Pi-utes, in southern and central Nevada, Arizona, California, Utah.

Shoshonees or *Snakes*, in New Mexico and Colorado, Idaho and southern Oregon.

Utes or *Utahs*, in Utah, Colorado, New Mexico, etc.

Wihinash, in Oregon, south of Columbia river.

b. Sonoran Branch.

Acaxees, (?) in the Sierra de Topia.

Cahitas, south of Rio Yaqui.

Coras, in the Sierra de Nayarit.

Eudeves, a sub-tribe of Opatas.

Guaymas, on Rio de Guaymas.

Mayos, on R. Mayo, sub-tribe of Cahitas.

Nevomes, see *Pimas*.

Opatas, head-waters of Rio Yaqui.

Papayos, or *Papagos*, sub-tribe of Pimas.

Pimas, from Rio Yaqui to Rio Gila.

Sabaguís, sub-tribe of Pimas.

Tarahumaras, in the Sierra of Chihuahua.

Tehuecos, on R. del Fuerte, dialect of Cahita.

Tecoripas, speak dialect of Pima.

Tepehuanas, in Durango.

Tubares, in upper Sinaloa.

Yaquis, on Rio Yaqui.

c. Nahuatlécan Branch.

Alaguilacs, on Rio Motagua in Guatemala.

Aztecs, in the valley of Mexico.

Cuillatecos, south and west of Michoacan.

Mexicans, see *Aztecs*.

Meztitlatecas, in the Sierra of Meztitlan.

Nicaraos, in Nicaragua between Lake Nicaragua and the Pacific.

Niquirans, see *Nicaraos*.

Pípiles, on Pacific coast in Soconusco and Guatemala.

Seguas, near Chiriqui Lagoon.

Tecos, see *Cuillatecos*.

Tezcucans, in valley of Mexico.

Tlascalans, in Tlascala, east of valley of Mexico.

Tlascaltecans, in San Salvador.

2. THE OTOMIS.

According to Aztec tradition, the Otomis were the earliest owners of the soil of Central Mexico. Their language was at the conquest one of the most widely distributed of any in this portion of the continent. Its central regions were the states of Queretaro and Guanajuato; from the upper portion of the valley of Mexico it extended north to the Rio Verde, on the west it adjoined the Tarascas of Michoacan, and on the east the Huastecs of Panuco.

The Otomis are below the average stature, of dark color, the skull markedly dolichocephalic,* the nose short and flattened, the eyes slightly oblique. Following the lead of some of the old writers, modern authors have usually represented the Otomis as rude savages, far inferior to the Nahuas. Doubtless the latter often so represented them, but this does not correspond with what we learn of them from other sources. Although subjected by the Nahuas, they do not seem to have been excessively ignorant. Agriculture was not neglected, and from their cotton the women wove clothing for both sexes. Ornaments of gold, copper and hard stones were in use; their religion was conducted with ceremony;† and they were famous for their songs and musical ability.‡ The members of the nation to-day are laborious, good tempered, and endowed with a remarkable aptitude

* Four skulls in the collection of the Academy of Natural Sciences, Philadelphia, give a cephalic index of 73.

† Sahagun, *Historia de la Nueva España*, Lib. X, cap. 29.

‡ D. G. Brinton, *Ancient Nahuatl Poetry*, p. 134 (Philadelphia, 1887, in Library of Aboriginal American Literature).

for imitation, especially in sculpture. Some of the women are quite handsome.*

Their language has attracted a certain amount of attention, partly from its supposed similarity to the Chinese, partly because it is alleged to differ from most American tongues in showing no incorporation. Both of these statements have been proved erroneous.† It is a tongue largely monosyllabic, of extremely difficult enunciation, worn down by attrition almost to an isolating form, but not devoid of the usual traits of the languages of the continent. There are several dialects, the relations of which have been the subject of fruitful investigations.‡

OTOMI LINGUISTIC STOCK.

Jonaz, in Prov. of Queretaro.

Matlaltzincos, in Valley of Mexico and Mechoacan.

Mazahuas, southwest of Valley of Mexico.

Mecos, see *Jonaz*.

Otomis, throughout Central Mexico.

Pames, in Queretaro and Guanajuato.

Pirindas, see *Matlaltzincos*.

3. THE TARASCOS.

The Tarascans, so called from *Taras*, the name of a tribal god,|| had the reputation of being the tallest and handsomest people of Mexico.

* E. G. Tarayre, *Explorations des Regions Mexicaines*, p. 282, (Paris, 1879).

† D. G. Brinton, *Essays of an Americanist*, p. 366.

‡ H. de Charencey, *Melanges de Philologie et de Palæographie Américaine*, p. 23.

|| Sahagun, *Historia*, Lib. X, cap. 29. The name is properly *Tarex*, applied later in the general sense of "deity," "idol."

They were the inhabitants of the present State of Michoacan, west of the valley of Mexico. According to their oldest traditions, or perhaps those of their neighbors, they had migrated from the north in company with, or about the same time as the Aztecs. For some three hundred years before the conquest they had been a sedentary, semi-civilized people, maintaining their independence, and progressing steadily in culture.* When first encountered by the Spaniards they were quite equal and in some respects ahead of the Nahuas. The principal buildings of their cities, the chief of which was their capital Tzintzuntan, were of cut stone well laid in mortar. A number of remains of such have been reported by various travelers, many of them being conical mounds of dressed stones, locally called *yacates*, which probably are sepulchral monuments.†

In their costume the Tarascos differed considerably from their neighbors. The feather garments which they manufactured surpassed all others in durability and beauty. Cotton was, however, the usual material. Gold and copper are found in the mountains

Tarex is identified by Sahagun with the Nahuatl divinity Mixcoatl, the god of the storm, especially the thunder storm. The other derivations of the name Tarascos seem trivial. See Dr. Nicolas Leon, in *Anales del Museo Michoacano*, Tom. I. Their ancestors were known as Taruchas, in which we see the same radical.

* Dr. Nicolas Leon, of Morelia, Michoacan, whose studies of the archæology of his State have been most praiseworthy, places the beginning of the dynasty at 1200; *Anales del Museo Michoacano*, Tom. I, p. 116.

† From the Nahuatl, *yacatl*, point, apex, nose; though other derivations have been suggested.

of the district, and both these metals were worked with skill. Nowhere else do we find such complete defensive armor; it consisted of helmet, body pieces, and greaves for the legs and arms, all of wood covered neatly with copper or gold plates, so well done that the pieces looked as if they were of solid metal.*

A form of picture-writing was in use in Michoacan, but no specimen of it has been preserved. The calendar was nearly the same as that in Mexico, and the government apparently more absolute in form. Many but confused details have been preserved about their religion and rites. There was a mysterious supreme divinity, Túcupacha, though Curicaneri, who is said to have represented the sun, was the deity chiefly worshipped. Large idols of stone and many of smaller size of terra cotta may still be exhumed by the energetic archæologist. Cremation was in vogue for the disposition of the dead, and human sacrifices, both at funerals and in the celebration of religious rites, were usual.

The Tarascan language is harmonious and vocalic, and its grammar is thoroughly American in character, the verb being extraordinarily developed, the substantive incorporated in the expression of action, and the modifications of this conveyed by numerous infixes and suffixes.

* For numerous authorities, see Bancroft, *Native Races of the Pacific Coast*, vol. II, pp. 407-8; and on the antiquities of the country, Dr. Leon, in the *Anales del Museo Michoacano*, passim, and Beaumont, *Cronica de la Provincia de Mechoacan*, Tom. III, p. 87, sq. (Mexico, 1874).

4. THE TOTONACOS.

The first natives whom Cortes met on landing in Mexico were the *Totonacos*. They occupied the territory of Totonicapan, now included in the state of Vera Cruz. According to traditions of their own, they had resided there eight hundred years, most of which time they were independent, though a few generations before the arrival of the Spaniards they had been subjected by the arms of the Montezumas. The course of their early migrations they stated had been from the west and northwest, and they claimed to have been the constructors of the remarkable pyramids and temples of Teotihuacan, ten miles northwest of the city of Mexico. This boast we may be chary of believing, but they were unquestionably a people of high culture. Sahagun describes them as almost white in color, their heads artificially deformed, but their features regular and handsome.* Robes of cotton beautifully dyed served them for garments, and their feet were covered with sandals. The priests wore long black gowns with collars, so that they looked like Dominican monks. The religion which prevailed among them was a sun-worship with elaborate rites, among which were the circumcision of boys and a similar operation on girls.

These people were highly civilized. Cempoalla, their capital city, was situate about five miles from the sea, at the junction of two streams. Its houses were of brick and mortar, and each was surrounded by a small garden, at the foot of which a stream of fresh water was conducted. Fruit trees and grain

* Sahagun, *Historia de la Nueva España*, Lib. X, cap. 6.

fields filled the gardens and surrounded the city. Altogether, says the chronicler, it was like a terrestrial paradise.* That this description is not overdrawn, is proved by the remarkable ruins which still exist in this province, and the abundant relics of ancient art which have been collected there, especially by the efforts of Mr. Hermann Strebel, whose collections now form part of the Berlin Ethnographic Museum.†

The affinities of the Totonacos are difficult to make out. Sahagun says that they claimed kinship with the Huastecs, their neighbors to the north, which would bring them into the Maya stock. Their language has, in fact, many words from Maya roots, but it has also many more from the Nahuatl, and its grammar is more in accord with the latter than with the former.‡ Besides these, there is a residuum which is different from both. For this reason I class them as an independent stock, of undetermined connections.

5. THE ZAPOTECES AND MIXTECS.

The greater part of Oaxaca and the neighboring regions are still occupied by the Zapotecs, who call themselves *Didja-Za*.|| There are now about 265,000 of them, about fifty thousand of whom speak nothing but their native tongue. In ancient times they con-

* Herrera, *Historia de las Indias Occidentales*, Dec. II., Lib. V., cap. 8.

† Strebel, *Alt-Mexiko*.

‡ Pimentel, *Lenguas Indigenas de Mexico*, Tom. III., p. 345, sq.

|| From *didja*, language, *za*, the national name.

stituted a powerful independent state, the citizens of which seem to have been quite as highly civilized as any member of the Aztecan family. They were agricultural and sedentary, living in villages and constructing buildings of stone and mortar. The most remarkable, but by no means the only specimens of these still remaining are the ruins of Mitla, called by the natives *Ryo Ba*, the "entrance to the sepulchre," the traditional belief being that these imposing monuments are sepulchres of their ancestors.* These ruins consist of thirty-nine houses, some of adobe, but most of stone, and two artificial hills. The stone houses have thick walls of rough stone and mortar, faced with polished blocks arranged in a variety of symmetrical patterns, such as are called grecques. Sometimes these patterns are repeated on the inner walls, but more frequently these were plastered with a hard white coat and painted an Indian red, with numerous figures. These delineations are on a par with those from the valley of Mexico and the ancient cities of Yucatan, and reveal much the same technique. One of the rooms is called the "hall of the columns," from six round monolithic columns nearly ten feet in height, which were intended to support a roof of heavy stone slabs.

The Mixtecs adjoined the Zapotecs to the west, extending along the coast of the Pacific to about the present port of Acapulco. In culture they were

* Mr. A. Bandelier, in his careful description of these ruins (*Report of an Archæological Tour in Mexico*, Boston, 1884) spells this *Lyo-ba*. But an extensive *MS. Vocabulario Zapoteco* in my possession gives the orthography *riyoo baa*.

equal to the Zapotecs; having a preference for an agricultural life, constructing residences of brick and stone and acquainted with a form of picture or hieroglyphic writing, in which they perpetuated the memory of their elaborate mythology.* They pretended to have taken their name from Mixtecatl, one of the seven heroes who set out from Chicomoztoc, "the land of seven caves," far in the north, and at other times pretended descent from the fabulous Toltecs, claims which Sahagun intimates were fictions of the Nahuas living among them.†

The Zapotecs made use of a calendar, the outlines of which have been preserved. It is evidently upon the same astronomical theory as the Mexican, as was their system of enumeration. Their language is not inharmonious. It is called the *ticha za*, "language of the noble people."

ZAPOTEC-MIXTEC LINGUISTIC STOCK.

Amusgos, in Guerrero.

Chatinos, in Oaxaca, department of Jamiltepec.

Chuchonas, on borders of Oaxaca and Guerrero.

Cuicatecos, in Oaxaca, department of Teotilan.

Mazatecos, in Oaxaca, near boundary of Puebla, in ancient province of Mazatlan.

Mixtecos, in Oaxaca and Guerrero.

Papabucos, in Oaxaca.

Soltecos, in Oaxaca.

Zapotecos, in Oaxaca.

* Garcia, *Origen de los Indios*, Lib. V., cap. IV., gives a lengthy extract from one of their hieroglyphic mythological books.

† Sahagun, *Historia de la Nueva España*, Lib. X., cap. VI.

6. THE ZOQUES AND MIXES.

The mountain regions of the isthmus of Tehuantepec and adjacent portions of the states of Chiapas and Oaxaca are the habitats of the Zoques, Mixes, and allied tribes. The early historians draw a terrible picture of their valor, savagery and cannibalism, which reads more like tales to deter the Spaniards from approaching their domains than truthful accounts.* However this may be, they have been for hundreds of years a peaceful, ignorant, timid part of the population, homely, lazy and drunken, but not violent or dangerous. The Mixes especially cultivate abundance of maize and beans, and take an interest in improving the roads leading to their towns.†

The faint traditions of these peoples pointed to the south for their origin. When they lived in Chiapas they were conquered by the Chapanees (Mangues), and this induced many of them to seek independence in the Sierra to the north and west. At present the main village of the Mixes is San Juan Guichicovi, while the Zoques are scattered between the Rio del Corte and the Rio Chiapa. They are described as agricultural and laborious, but also as stupid, inclined to drunkenness, and very homely.‡

A comparison of the two languages leaves no doubt as to their derivation from a common stem.

* Herrera, *Historia de las Indias Occidentales*. Dec. IV., Lib. X., cap. 7.

† *Explorations and Surveys of the Isthmus of Tehuantepec*, pp. 126-7. (Washington, 1872.)

‡ J. G. Barnard, *The Isthmus of Tehuantepec*, pp. 224, 225. (New York, 1853.)

ZOQUE LINGUISTIC STOCK.

Chimalapas, a sub-tribe of Zoques.

Mixes, in Oaxaca, and on the Isthmus.

Tapijulapanes, on Rio de la Sierra.

Zoques, in eastern Tabasco, Chiapas and Oaxaca.

7. THE CHINANTECS.

The Chinantecs inhabited Chinantla, which is a part of the state of Oaxaca, situated in the Sierra Madre, on the frontiers of the province of Vera Cruz. Their neighbors on the south were the Zapotecs and Mixes, and on the north and east the Nahuas. They lived in secluded valleys and on rough mountain sides, and their language was one of great difficulty to the missionaries on account of its harsh phonetics. Nevertheless, Father Barrera succeeded in writing a *Doctrina* in it, published in 1730, the only work which has ever appeared in the tongue. The late Dr. Berendt devoted considerable study to it, and expressed his conclusions in the following words: "Spoken in the midst of a diversity of languages connected more or less among themselves, it is itself unconnected with them, and is rich in peculiar features both as to its roots and its grammatical structure. It is probable that we have in it one of the original languages spoken before the advent of the Nahuas on Mexican soil, perhaps the mythical Olmeca."*

The Chinantecs had been reduced by the Aztecs and severely oppressed by them. Hence they welcomed the Spaniards as deliverers. Their manners were savage and their disposition warlike.† Other

* *Apuntes sobre la Lengua Chinanteca*, MS.

† Herrera, *Hist. de las Indias Occidentales*. Dec. III., Lib. III., cap. 15.

names by which they are mentioned are *Tenez* and *Teutecas*.

8. THE CHAPANECES AND MANGUES.

In speaking of the province of Chiapas the historian Herrera informs us that it derived its name from the pueblo so-called, "whose inhabitants were the most remarkable in New Spain for their traits and inclinations."* They had early acquired the art of horsemanship, they were skillful in all kinds of music, excellent painters, carried on a variety of arts, and were withal very courteous to each other.

One tradition was that they had reached Chiapas from Nicaragua, and had conquered the territory they possessed from the Zoques, some of whom they had rendered tributary, while others had retired further into the Sierra. But the more authentic legend of the Chapas or Chapanecs, as they were properly called from their totemic bird the *Chapa*, the red macaw, recited that their whole stock moved down from a northern latitude, following the Pacific coast until they came to Soconusco, where they divided, one part entering the mountains of Chiapas, the other proceeding on to Nicaragua, where we find them under the name of Mangues, or Chorotegans, along the shores of Lake Managua.† Here they occupied a number of populous villages, estimated by the historian Oviedo to contain about forty thousand souls.‡ They were agricultural and sedentary, and

*Herrera, *Historia de las Indias Occidentales*. Dec. IV., Lib. X., cap. II.

†Gregoria Garcia, *Origen de los Indios*, Lib. V., cap. v.

‡Oviedo, *Historia General de las Indias*, Lib. XLII., cap. 5.

moderately civilized, that is, they had hieroglyphic books, wove and spun cotton, were skilled in pottery and had fixed government. They are described as lighter in color than most Indians, and wearing long hair carefully combed. A small band wandered still further south, to the vicinity of Chiriqui Lagoon.*

The Chapanec language is one of marked individuality. Its phonetics are harmonious, but with many obscure and fluctuating sounds. In its grammatical construction we find a singular absence of distinction between subject and object. While the appreciation of number in the form of nouns is almost absent, their relations are expressed with excessive particularity, so that a noun may have different forms, as it is used in different relations.† There is comparatively slight development of the polysynthetic structure which is generally seen in American languages.

CHAPANEC LINGUISTIC STOCK.

Chapanecs, on Rio Grande in central Chiapas.

Chorotegas, see *Mangues*.

Dirians, in the mountains south of Lake Managua.

Guetares, in Costa Rica.

Mangues, on Lake Managua, Nicaragua.

Orotinans, on the Gulf of Nicoya.

9. CHONTALS AND POPOLOCAS; TEQUISTLATECAS AND MATAGALPAS.

According to the census of 1880 there were 31,000 Indians in Mexico belonging to the *Familia Chontal*.‡

* Peralta, *Costa Rica, Nicaragua y Panama, en el Siglo XVI*, p. 777. (Madrid, 1883.)

† Lucien Adam, *La Langue Chiapanèque* (Vienna, 1887); Fr. Müller, *Grundriss der Sprachwissenschaft*, Bd. IV., Abt. I., s. 177.

‡ *Anales del Ministerio de Fomento*, p. 98. (Mexico, 1881.)

No such family exists. The word *chontalli* in the Nahuatl language means simply "stranger," and was applied by the Nahuas to any people other than their own. According to the Mexican statistics, the Chontals are found in the states of Mexico, Puebla, Oaxaca, Guerrero, Tabasco, Guatemala and Nicaragua. A similar term is *popoloca*, which in Nahuatl means a coarse fellow, one speaking badly, that is, broken Nahuatl. The Popolocas have also been erected into an ethnic entity by some ethnographers, with as little justice as the Chontallis. They are stated to have lived in the provinces of Puebla, Oaxaca, Vera Cruz, Mechoacan, and Guatemala. Sometimes the same tribe has been called both Chontales and Popolocas, which would be quite correct in the Nahuatl tongue, since in it these words are common nouns and nearly synonymous in signification; but employed in an ethnographic sense, they have led to great confusion, and the blending into one of distinct nationalities. I shall attempt to unravel this snarl as far as the linguistic material at my command permits.

The Chontales of Oaxaca lived on the Pacific coast of the Cordillera in that State, in the Sierra Quiogolani. They were brought under instruction in the latter part of the sixteenth century by Father Diego Carranza, who labored among them for twelve years with gratifying success, and wrote a *Doctrina*, *Sermones* and *Ejercicios Espirituales* in their language.* Unfortunately these works are no longer to be found,

* Beristain y Souza, *Biblioteca Hispano-Americana Septentrional*, Tomo I., p. 438.

and the only specimen of their idiom which I have obtained is a vocabulary of 23 words, collected by John Porter Bliss in 1871. This is too limited to admit of positive identification; but it certainly shows several coincidences with the Yuma linguistic stock.* Provisionally, however, I give it the name of *Tequistlatecan*, from the principal village of the tribe, where Father Carranza built his church. The Chontales of Guerrero were immediately adjacent to those of Oaxaca, in the same Sierra, and there is every reason to believe that they belonged to the same family; and from their location, history and associations, I do not doubt that Orozco y Berra was right in placing the Triquis in the same family.†

The Chontales of Tabasco occupied most of the basin of the Rio Grijalva. Herrera states that their language was that in general use in the province, being richer in words than the Zoque, or the provincial Mexican which had been introduced.‡ This leads us

* For example :

	<i>Tequistlatecan.</i>	<i>Yuma dialects.</i>
Man,	acue,	eke-tam, ham-akava.
Woman,	canoc,	anai, sinyok.
Sun,	orá,	rahj.
Moon,	mutla,	h'la.
Water,	laha,	aha, kahal.
Head,	ahūa,	hū.
Eyes,	au,	yu.
Mouth,	aco,	a, aha.
Tree,	ehe,	ee-ee.
Foot,	lamish,	mie.
Two,	ucuc,	kokx, goguo.

† *Geografía de las Lenguas de Mejico*, p. 187.

‡ *Historia de las Indias Occidentales*, Dec. III., Lib. VII., cap. III.

to believe that it was a Maya dialect, a supposition confirmed by a MS. vocabulary obtained by the late Dr. C. H. Berendt. By this it is seen that the Chontal of Tabasco is a member of the numerous Maya family, and practically identical with the Tzendal dialect.*

In Nicaragua two entirely different peoples have been called Chontales. The first of these is also sometimes mentioned as Popolucas. Their tongue is, or a generation ago was, current in and around the city of Matagalpa and in various hamlets of the departments of Matagalpa, Segovia and Chontales. The only specimen I know of it is a vocabulary, obtained in 1874 by the Rev. Victor Noguera, and supplied by him to Dr. Berendt. It contains a small percentage of words from the neighboring dialects, but in the mass is wholly different, and I consider it an independent stock, to which I give the name *Matagalpan*.

The second Chontales of Nicaragua are those mentioned as Chontal-lencas by M. Désiré Pector, and are none other than the Lencas described by Mr. E. G. Squier.

The Chontal of Honduras is located geographically in those regions where the Chorti dialect of the Maya stock prevails, and there is no reasonable doubt but that it is Chorti and nothing more.

The Chontales described by Mr. E. G. Squier as living in the mountains north of Lake Nicaragua,

* See also Dr. Berendt's observations on this language in Lewis H. Morgan's *Systems of Consanguinity and Affinity in the Human Family*, p. 263. (Washington, 1871.)

about the sources of the Blewfields river, and of whose language he gives a short vocabulary,* are proved by this to be members of the extensive family of the Ulvas.

Of the various tribes called Popolocas, that living at the period of the conquest in and near Puebla was the most important. Their chief city was Tecamachcalco, and they occupied most of the old province of Tepeaca. We can form some idea of their number from the statement that in the year 1540 Father Francisco de las Navas visited their country for missionary purposes, and in less than two months converted (!) and baptized 12,000 of them, and this without any knowledge of their language.† The first who did obtain a familiarity with it was Francisco de Toral, afterwards first bishop of Yucatan. He described it as most difficult, but nevertheless succeeded in reducing it to rules and wrote an *Arte y Metodo* of it, now unfortunately lost.‡ Its relationship has remained obscure. De Laet asserted that it was merely a corrupt dialect of the Nahuatl;§ while Herrera was

* In his *Nicaragua, its People, Scenery and Monuments*, Vol. II., pp. 314, 324. (New York, 1856.)

† "Fr. Francisco de las Navas primus omnium Indos qui *Popolocae* nuncupantur anno Dom. 1540, divino lavacro tinxit, quorum duobus mensibus plus quam duodecim millia baptizati sunt." Franciscus Gonzaga, *De Origine Seraphicae Religionis*, p. 1245. (Romae, 1587.)

‡ "Fr. Francisco de Toral, obispo que fué de Yucatan, supo primero de otro alguno la lengua popoloca de Tecamachcalco, y en ella hizo arte y vocabulario, y otras obras doctrinales." Gerónimo de Mendieta, *Historia Ecclesiastica Indiana*, Lib. V., cap. 44.

§ "Lingua Mexicanâ paullulum diversa." De Laet, *Novus Orbis*, p. 25.

informed by his authorities that it was a wholly different tongue.* In this opinion he was right. In 1862 Dr. Berendt succeeded in obtaining a short vocabulary of it as it is still spoken at Oluta, Tesistepec, San Juan Volador and the neighboring country. A comparison shows that it belongs to the Mixe family. The ancient province of Tepeaca adjoined directly the territory of the Mixes, and this identification proves that their tongue was more important and extended much more widely than has hitherto been supposed. It was spoken, therefore, by the Tlapanecos, Coviscas and Yopes, who were located in this region.

The Popoloca of Oaxaca is an entirely different tongue. It is mentioned as identical with the Chochona, and some have supposed this dialect, in which we have a *Catecismo* by Father Roldan, was the same as the Popoloca of Tepeaca. This is an error. As I have said, the first missionary to master and write about the latter was Father Toral, who wrote his *Arte* about 1561; but more than ten years before that, to wit, in 1550, Father Benito Fernandez had printed in the city of Mexico his *Doctrina en Lengua Mixteca*, and had composed variants in the Tepuzcolola and Chochona dialects of that tongue.† The Chochona or Popoloca, of Oaxaca, belongs to the Zapotec-Mixtec, and not to the Zoque-Mixe family.

The Popolocas who lived in and near Michoacan were also called Tecos, and Orozco y Berra enumer-

* *Historia de las Indias Occidentales*, Decad. II., Lib. X., cap. 21.

† See the note of J. G. Icazbalceta to the *Doctrina* of Fernandez, in H. Harrisse's *Biblioteca Americana Vetustissima*, p. 445, sq.

ates the language they spoke, the Teca, among those which are extinct.* The name *Tecos*, however, was merely an abbreviated form of *Cuitlatecos*, and was applied to the conquered Nahuatl population around Michoacan. In some of the old glossaries *teco* is explained by *Mexicano*.† The language they spoke belonged to the Nahuatl branch of the Uto-Aztecan stock.

The Popolocas of Guatemala were located at the close of the eighteenth century in two curacies widely apart.‡ One of these was Yanantique, partido of San Miguel, province of San Salvador, and contained the villages Conchagua and Intipuca. Now Intipuca is a Lenca name, as stated by Mr. Squier, and we are thus authorized to identify these Popolocas with the Lencas. The other Popolocas were at and near Conguaco in the partido of Guazacapan, province of Escuintla, where they lived immediately adjacent to the Xincas. Dr. Otto Stoll identifies them with the Mixes, but by an error, as he mistook the vocabulary collected by Dr. Berendt of the Popoloca of Oluta, for one of the Popoloca of Conguaco.§ What language is spoken there I do not know, as I have not been able to find a word in it in any of my authorities.

* *Geografia de las Lenguas de Mejico*, p. 273.

† See an article "Los Tecos," in the *Anales del Museo Michoacano*, Año II., p. 26.

‡ Domingo Juarros, *Compendio de la Historia de la Ciudad de Guatemala*, Tomo I., pp. 102, 104, et al. (Ed. Guatemala, 1857.)

§ Dr. Otto Stoll, *Zur Ethnographie der Republik Guatemala*, s. 26 (Zurich, 1884).

Dr. Julius Scherzer has further added to the confusion about the Popolocas of Guatemala by printing at Vienna a vocabulary under this name which he had obtained near the Volcan de Agua.* It is nothing more than the ordinary Cakchiquel dialect of that locality, known as the *lengua metropolitana* from its official adoption by the church.

IO. THE MAYAS.

The geographical relations of the members of the Maya stock are in marked contrast to those of the Uto-Aztecan—its only rival in civilization. Except the colony of the Huastecas on the shores of the gulf of Mexico in the valley of the Rio Panuco, all its dialects were in contiguity. The true Maya, which is believed to be the purest form of the language, extended over the whole of the peninsula of Yucatan, around Lake Peten, and far up the affluents of the Usumacinta, the dialect of the Lacandons being closely akin to it. The principal tribes in Guatemala were the Quiches, the Cakchiquels and the Mams; while in Tabasco the Tzendals and the Tzotzils held an extensive territory. We cannot identify the builders of the ruined cities of Palenque in Tabasco and Copan in Honduras with the ancestors of any known tribe, but the archæological evidence is conclusive that whoever they were, they belonged to this stock, and spoke one of its dialects.

The historic legends of several members of the family have been well preserved. According to the

*In the *Sitzungsbericht der Kais. Akad. der Wissenschaften*, Wien, 1855.

earliest authorities, those of the Quiches went back more than eight hundred years before the conquest,* that is, to about 700 A. D.; while the chronicles of the Mayas seem to present a meagre sketch of the nation nearly to the beginning of the christian era.† The uniform assertion of these legends is that the ancestors of the stock came from a more northern latitude, following down the shore of the Gulf of Mexico. This is also supported by the position of the Huastecas, who may be regarded as one of their tribes left behind in the general migration, and by the tradition of the Nahuas which assigned them a northern origin.‡ So far no relationship has been detected with any northern stock, but the striking similarity of some art remains in the middle Mississippi to those of Yucatan, suggests that one should search in this vicinity for their priscan home.§

Physically the Mayas are short, strong, dark, and brachycephalic. The custom of compressing the skull antero-posteriorly which formerly prevailed, exaggerated this latter peculiarity. When first encountered by the Spaniards they were split into a number of independent states of which eighteen are

* "Demas de ocho cientos años," says Herrera. *Historia de las Indias Occidentales*, Dec. III., Lib. IV., Cap. XVIII.

† I have edited some of these with translations and notes in *The Maya Chronicles*, Philadelphia, 1882. (Volume I. of my *Library of Aboriginal American Literature*).

‡ Sahagun, *Historia de la Nueva España*, Lib. X., cap. 29, sec. 12.

§ One of the most remarkable of these coincidences is that in the decoration of shells pointed out by Mr. Wm. H. Holmes, in his article on "Art in Shells," in the *Second Annual Report of the Bureau of Ethnology*. (Washington, 1883.)

enumerated in Yucatan alone. According to tradition, these were the fragments of a powerful confederacy which had broken up about a century before, the capital of which was Mayapan. The tribes were divided into gentes, usually named after animals, with descent in the male line. A man bore the names of both his father's and mother's gens, but the former was distinguished as his "true name." The chieftainship was hereditary, a council from the gentes deliberating with the ruler.

The art in which these people excelled was that of architecture. They were born builders from a remote epoch. At the time of the conquest the stately structures of Copan, Palenque, T'Ho, and many other cities were deserted and covered with an apparently primitive forest; but others not inferior to them Uxmal, Chichen Itza, Peten, etc., were the centers of dense population, proving that the builders of both were identical. The material was usually a hard limestone, which was polished and carved, and imbedded in a firm mortar. Such was also the character of the edifices of the Quiches and Cakchiquels of Guatemala. In view of the fact that none of these masons knew the plumb-line or the square, the accuracy of the adjustments is remarkable.* Their efforts at sculpture were equally bold. They did not hesitate to attempt statues in the round of life-size and larger, and the facades of the edifices were covered with extensive and intricate designs cut in high

* On this point see "The Lineal Measures of the Semi-Civilized Nations of Mexico and Central America," in my *Essays of an Americanist*, p. 433. (Philadelphia, 1890.)

relief upon the stones. All this was accomplished without the use of metal tools, as they did not have even the bronze chisels familiar to the Aztecs. Gold, silver and copper were confined to ornaments, bells and similar purposes.

The chief source of the food supply was agriculture. Maize was the principal crop, and the arable land was carefully let out to families by the heads of the villages. Beans and peppers were also cultivated and bees were domesticated, from which both honey and wax, used in various arts, were collected. Cotton was woven into fabrics of such delicacy that the Spaniards at first thought the stuffs were of silk. It was dyed of many colors, and was the main material of clothing. Brilliant feathers were highly prized. Their canoes were seaworthy, and though there was no settlement of the Mayas on the island of Cuba as has been alleged, there was a commercial interchange of products with it, since Columbus was shown wax from Yucatan and was told about the peninsula. An active commerce was also maintained with southern Mexico, along the Gulf Coast, the media of exchange being cacao beans, shells, precious stones and flat pieces of copper.*

The points which have attracted the most attention in Maya civilization, next to its architecture, are the calendar and the hieroglyphics. The calendar is

* The principal authority is the work of Diego de Landa, *Relacion de las Cosas de Yucatan*. It has been twice published, once imperfectly by the Abbé Brasseur de Bourbourg, Paris, 1864, 8 vo.; later very accurately by the Spanish government, Madrid, 1881, folio.

evidently upon the same basis as that of the Mexicans, turning upon the numerals thirteen, twenty, and four. But the Mayas appear to have had more extended measures for the computation of time than the Aztecs. Besides the cycle of twenty years, called by them the *katun*, and that of fifty-two years, they had the *ahau katun*, or Great Cycle, of two hundred and sixty years.

Both the Cakchiquels, Quiches and Mayas of Yucatan were literary peoples. They made frequent use of tablets, wrote many books, and covered the walls of their buildings with hieroglyphs carved on the stone or wood, or painted upon the plaster. Their characters are entirely different from those of the Mexicans. Most of them have rounded outlines, something like that of a section of a pebble, and for this reason the name "calculiform" has been applied to the writing. Their books were of maguey paper or of parchment, folded like those of the Mexicans. Although five or six of them have been preserved, as well as numerous inscriptions on the walls of buildings, no satisfactory interpretations have been offered, largely, perhaps, because none of the interpreters have made themselves familiar with the Maya language.*

Imperfect descriptions of the myths and rites of the Yucatecan Mayas are preserved in the old Spanish

* The most profitable studies in the Maya hieroglyphs have been by Dr. Cyrus Thomas in the United States, Dr. E. Förstemann, Ed. Seler and Schellhas in Germany, and Prof. L. de Rosny in France. On the MSS. or codices preserved, see "The Writings and Records of the Ancient Mayas" in my *Essays of an Americanist*, pp. 230-254.

authors; while of the Quiches we have in the original their sacred book, the *Popol Vuh* with a fair translation by the Abbé Brasseur de Bourbourg.* This may well be considered one of the most valuable monuments of ancient American literature, and its substantial authenticity cannot be doubted. Its first part presents a body of ancient mythology and its second the early history of the tribe. The latter is supplemented by a similar document relating to the history of their neighbors the Cakchiquels, written at the time of the conquest, which I have published from the unique MS., in my possession.† Many facts relating to their ancient mythology, history and superstitions were written down by educated natives of Yucatan in a series of documents entitled "the Books of Chilán Balam," copies of a number of which have been preserved.‡ They are replete with curious material.

MAYA LINGUISTIC STOCK.

Achis, in eastern Guatemala, now extinct.

Aguatecas, in Aguacatan, Guatemala.

Cakchiquels, in central Guatemala.

Chaneabals, in eastern Chiapas.

Chinantecos or *Cinantecos*, same as *Tzotzils*.

Choles, in Depart. Palenque, in Chiapas.

Chortis, in valley of Rio Motagua, near Copan.

Huastecas, on Rio Panuco, north of Vera Cruz.

* *Popol Vuh, Le Livre Sacré.* Paris, 1861.

† *The Annals of the Cakchiquels, the original text with a Translation, Notes and Introduction.* Phila., 1885. (Volume VI. of my *Library of Aboriginal American Literature.*)

‡ See "The Books of Chilán Balam," in my *Essays of an Americanist*, pp. 255-273.

Ixils, on head-waters of Rio Salinas, in Guatemala.

Lacandons, on the Rio Lacandon.

Mams, in western Guatemala.

Mayas, in peninsula of Yucatan.

Mopans, north of the Chols, in Guatemala.

Quekchis, on Rio Cahabon, in Guatemala.

Quiches (Utlateca), head-waters of Rio Grande, Guatemala.

Pokomams, south of Rio Grande, in Guatemala.

Pokonchis, in central Guatemala.

Tzendals, in Tabasco and Chiapas.

Tzotzils, in Chiapas.

Tzutuhils, south of lake Atitlan, Guatemala.

Uspantecas, on Rio Negro, Guatemala.

II. THE HUAVES, SUBTIABAS, LENCAS, XINCAS, XICAQUES, "CARIBS," MUSQUITOS, ULVAS, RAMAS, PAYAS, GUATUSOS.

The small tribe of the *Huaves* occupies four hamlets on the isthmus of Tehuantepec on the Pacific Ocean.* The men are tall and strong but the women are unusually ugly. Their occupation is chiefly fishing and they have the reputation of being dull. The language they speak is said to be of an independent stock, and according to various writers the tribe claims to have come from some part of the coast a considerable distance to the south. The vocabularies of their tongue are too imperfect to permit its identification.

The *Subtiabas* are inhabitants of the valley of that name near the modern city of Leon in Nicaragua. They were called *Nagrandans* by Mr. E. G. Squier,†

*The name *Huaves* is derived from the Zapotec *huavi*, to become rotten through dampness. (*Vocabulario Zapoteco*, MS. in my possession.) It was probably a term of contempt.

† *Nicaragua, its People and Scenery*, Vol. II., p. 310.

because the site of ancient Leon was on the plain of Nagrando and the province also bore this name at the time of the conquest. They are probably the descendants of the ancient Maribois, whom both Oviedo and Palacios place a few leagues from Leon and to whom they ascribe an independent language; but it is an error of some later writers to confound them with the Chorotegans or Mangues, to whom they had no relationship whatever. Their language stands by itself among the inter-isthmian stocks.

The *Lenca* is spoken by several semi-civilized tribes in central Honduras. Its principal dialects are the Intibucat, Guajiquero, Opatoro and Similaton. It is an independent stock, with no affinities as yet discovered. The Guajiqueros dwell in remote villages in the San Juan Mountains southwest of Comayagua, the capital of Honduras. We owe to the late Mr. E. G. Squier vocabularies of all four dialects and an interesting description of the present condition of the stock.*

A little known tribe in a low stage of culture dwelt on the Rio de los Esclavos, the *Xincas*. They extended about fifty miles along the Pacific coast and thence back to the Sierra which is there about the same distance. The one vocabulary we have on their tongue shows some loan words from their Nahuatl neighbors the Pipiles, but in other respects it appears to be a stock by itself. Its radicals are generally monosyllabic, and the formation of words is by suf-

*E. G. Squier, "A Visit to the Guajiquero Indians," in *Harper's Magazine*, October, 1859. A copy of his vocabularies is in my possession.

fixes.* The tribe was conquered by Alvarado, in 1524, who states that their principal village was at Guazacapam. It was built of wood and populous. There are some reasons for believing that previous to the arrival of the Quiches and Cakchiquels on the plains of Guatemala that region was occupied by this nation, and that they gave way before the superior fighting powers of the more cultured stock.

The *Xicaques* live in the state of Honduras to the number of about six thousand. Their seats are on the waters of the Rio Sulaque and Rio Chaloma. They acknowledge one ruler, who is elective and holds the office for life. Their language contains a few Nahuatl words, but in the body of its vocabulary reveals no relationship to any other stock.

The word *Carib* is frequently applied by the Spanish population to any wild tribe, merely in the sense of savage or wild. Thus on the upper Usumacinta the Lacandones, a people of pure Maya stock, are so called by the whites; on the Musquito coast the uncivilized Ulvas of the mountains are referred to as Caribs. There are a large number of pure and mixed Caribs, probably five or six thousand, in British Honduras near Trujillo, but they do not belong to the original population. They were brought there from the island of St. Vincent in 1796 by the British authorities. Many of them have the marked traits of the negro through a mingling of the races, and are

*I collected and published some years ago the only linguistic material known regarding this tribe. "On the Language and Ethnologic Position of the Xinca Indians of Guatemala," in *Proceedings of the American Philosophical Society*, 1884.

sometimes called "Black Caribs." The Rev. Alexander Henderson, who has composed a grammar and dictionary of their dialect, gives them the name *Karifs*, a corruption of *Carib*, and is the term by which they call themselves.

That portion of Honduras known as the Musquito coast derived its name, not from the abundance of those troublesome insects, but from a native tribe who at the discovery occupied the shore near Blewfield Lagoon. They are an intelligent people, short in stature, unusually dark in color, with finely cut features, and small straight noses—not at all negroid, except where there has been an admixture of blood. They number about six thousand, many of whom have been partly civilized by the efforts of missionaries, who have reduced the language to writing and published in it a number of works. The *Tunglas* are one of the sub-tribes of the *Musquitos*.

On the head-waters of the streams which empty along the Musquito coast reside the numerous tribes of the *Ulvas*, called by the English *Smoos*. These are dark, but lighter in color than the *Musquitos*, and are much ruder and more savage. The custom of flattening the head prevails among them, and as their features are not handsome at the best, and as they are much afflicted with leprous diseases, they are by no means an attractive people.

THE ULVA LINGUISTIC STOCK.

Bulbuls, see *Poyas*.

Carchas or *Cukras*, on Rio Meco above Matlack Falls.

Cocos, on Rio Coco.

Micos, on Rio Mico.

Parrastahs, on Rio Mico.

Pantamas, on upper basin of Rio Coco.

Melchoras, on Rio de los Ramas.

Siquias, on upper Rio Mico.

Smoos, see *Woolwas*.

Subironas, on Rio Coco.

Twakas, at San Blas and on Rio Twaka.

Woolwas, *Ulvas*, *Smoos*, on head-waters of Blewfield river.

The *Ramas*, described as men of herculean stature and strength, with a language of their own, reside on a small island in Blewfield Lagoon.

Toward the mountains near the head-waters of Black River, are the *Payas*, also alleged to be a separate stock. But unfortunately we have no specimens of these tongues.*

The upper waters of the Rio Frio and its affluents form the locality of the *Guatusos* or Huatusos. By some older writers these were supposed to be of Nahuatl affinities, and others said that they were "white Indians." Neither of these tales has any foundation. I have seen some of the Guatusos, and their color is about that of the average northern Indians; and as for their language, of which we have rather full vocabularies, it is not in the slightest related to the Nahuatl, but is an independent stock. They are a robust and agile set, preferring a wild life, but cultivating maize, bananas, tobacco and other vegetables, and knitting nets and hammocks from

* On the ethnography of the Musquito coast consult John Collinson, in *Mems. of the Anthropol. Soc. of London*, Vol. III., p. 149, sq.; C. N. Bell, in *Jour. of the Royal Geograph. Soc.*, Vol. XXXII., p. 257, and the *Bericht* of the German Commission, Berlin, 1845. Lucien Adam has recently prepared a careful study of the Musquito language.

the fibres of the agave. The huleros, or gatherers of india rubber, persecute them cruelly, and are correspondingly hated. It is doubtful if at present they number over six hundred.*

The mountain chain which separates Nicaragua from Costa Rica, and the head-waters of the Rio Frio from those of the more southern and eastern streams, is the ethnographic boundary of North America. Beyond it we come upon tribes whose linguistic affinities point towards the southern continent. Such are the Talamancas, Guaymies, Valientes and others, which I must include, in view of recent researches into their languages, in the next section.

* See Leon Fernandez and J. F. Bransford, in *Rep. of the Smithsonian Institution*, 1882, p. 675; B. A. Thiel, *Apuntes Lexicograficos*, Parte III.; O. J. Parker, in Beach's *Indian Miscellany*, p. 346.

SOUTH AMERICAN TRIBES.

GENERAL REMARKS.

THE linguistic classification of the South American tribes offers far greater difficulties than that of North America. Not only has it been studied less diligently, but the geographical character of the interior, the facilities with which tribes move along its extensive water-ways, and the less stable temperament of the white population have combined to obscure the relationship of the native tribes and to limit our knowledge about them.

The first serious attempt to take a comprehensive survey of the idioms of this portion of the continent was that of the Abbé Hervas in his general work on the languages of the globe.* Balbi and Adelung did scarcely more than pursue the lines he had traced in this portion of the field. So little had these obtained definite results that Alexander von Humboldt renounced as impracticable the arrangement of South American tribes by their languages, because "more than seven-eighths would have remained what the classifying botanists call *incertæ sedis*."†

* *Catalogo de las Lenguas conocidas*. Madrid, 1805. This is the enlarged Spanish edition of the Italian original published in 1784, and it is the edition I have uniformly referred to in this work.

† *Personal Narrative*, Vol. VI., p. 352 (English trans., London, 1826).

This eminent naturalist, however, overlooked no opportunity to collect material for the study of the native tongues, and on his return to Europe placed what he had secured in the hands of his distinguished brother for analysis. William von Humboldt, who was the profoundest linguist of his day, gave close attention to the subject, but rather from a purely critical than an ethnographic aspect. He based upon the South American languages many principles of his linguistic philosophy; but so little general attention was given the subject that his most valuable study was first given to the press by myself in 1885.*

Sixty years ago the French traveler, Alcide D'Orbigny, published his important work devoted to South American ethnography, but confined to that portion of the continent he had visited, south of the parallel of 12° south latitude.† His classification was based partly on language, partly on physical traits, and as it seemed simple and clear, it has retained its popularity quite to the present day. He subsumes all the tribes in the area referred to under three "races," subdivided into "branches" and "nations" as follows:—

* *The Philosophic Grammar of American Languages, as set forth by Wilhelm von Humboldt; with the Translation of an Unpublished Memoir by him on the American Verb.* By Daniel G. Brinton. (8vo. Philadelphia, 1885.) This Memoir was not included in the editions of Wilhelm von Humboldt's Works, and was unknown even to their latest editor, Professor Steinthal. The original is in the Berlin Public Library.

† *L'Homme Americain de l'Amérique Méridionale, considéré sous ses Rapports Physiologiques et Moraux.* Par Alcide D'Orbigny. 2 vols. Paris, 1839.

<i>1. Ando-Peruvian Race.</i>		<i>2. Pampean Race.</i>		<i>3. Brasilio-Guaranian Race.</i>
BRANCH.	NATIONS.	BRANCH.	NATIONS.	NATIONS.
1. PERUVIAN.	{ Quichuas.	1. PAMPEAN.	{ Tehuelches.	{ Guaranis.
	{ Aymaras.		{ Puelches.	
	{ Chancos.		{ Charruas.	{ Botocudos.
	{ Atacamas.		{ Mbocobis.	
2. ANDEAN. (Antisian.)	{ Yuracares.		{ Mataguayos.	
	{ Mocetenes.		{ Abipones.	
	{ Tacanas.		{ Lenguas.	
	{ Maropas.		{ Samucus.	
3. ARAUCANIAN.	{ Apolistas.		{ Chiquitos.	
	{ Aucas.	2. CHIQUI-TEAN.	{ Saravecas.	
	{ Fuegians.		{ Otuques.	
			{ Curuminacas.	
			{ Covarecas.	
			{ Curaves.	
			{ Tapiis.	
			{ Curucanecas.	
			{ Paiconecas.	
			{ Corabecas.	
		3. MOXEAN.	{ Moxos.	
			{ Chapacuras.	
			{ Itonamas.	
			{ Canichanas.	
			{ Mobimas.	
			{ Cayuvavas.	
			{ Pacaguaras.	
			{ Itenes.	

In this classifications, the distinctions of "races" and "branches" are based exclusively on physical characteristics, and are at times in conflict with a linguistic arrangement. The Botocudos and Guaranis, for instance, are wholly dissimilar and should no more be classed together than the Peruvians and the Tupis; the Saravecas and Paiconecas speak Ara-

wak dialects; and other examples could be cited. When D'Orbigny confined himself to the identification of related tribes by a close scrutiny of their idioms, he rendered valuable service by introducing order into the chaotic nomenclature of earlier writers, as he forcibly points out; but his physical discriminations are of little value.

About the middle of this century, two German travelers, Von Tschudi and Von Martius, gave close attention to the linguistic ethnology of the continent, Von Tschudi in Peru and Von Martius in Brazil. The former found the field so unoccupied that he did not hesitate to write in a work published less than ten years ago, "In fact, the knowledge of the languages of South America is to-day less than it was two hundred years ago."* His own divisions of the linguistic regions (*Sprachgebiete*) of the continent is less satisfactory than we might expect. He describes three principal and seven minor districts, the former being, 1. The Pampero-Andean; 2. The inter-Andean; and 3. The Tupi-Guarani regions. The minor centers are, 1. The Arawak-Carib region; 2. That of Cundinamarca; 3. The Rio Meta; 4. The Rio Tolima; 5. The Rio Atrato; 6. The Rio Salado; 7. The Chaco; 8. That of the Moxos.

These are so far from meeting the requirements of our linguistic possessions at present that scarcely one of them can be accepted. Von Tschudi was an able and critical scholar in his particular field, that of the Kechua tongue, but he had not made a wide study of South American languages.

* *Organismus der Khetschua Sprache*. Einleitung. (Leipzig, 1884.)

Von Martius was much more of a comparative linguist. His work on the ethnography and linguistics of South America* is a mine of general information, and indispensable to every student of the subject. Taking the numerous and confused dialects of Brazil, and the almost hopeless synonymy of its tribal names, he undertook a classification of them by establishing verbal and grammatical similarities. It is now generally recognized that he went too far in this direction. He maintained, for instance, that there is a demonstrable relationship between the Tupi, the Carib and the Arawak stocks; later studies have not endorsed this, but have tended to show that they cannot be traced to any common mother-speech. What Martius called the "Guck" nations, which he brought into connection through the word of that sound used by them to designate the maternal uncle, are now considered to be without general relationship. The researches of Karl Von Den Steinen and Lucien Adam have overthrown this theory.

It is especially in studying the vast and largely unexplored regions watered by the upper streams of the mighty Amazon, that one is yet at a loss to bring the native inhabitants into ethnic order. Of the various explorers and travellers who have visited that territory, few have paid attention to the dialects of the natives, and of those few, several have left their collections unpublished. Thus, I have been unable to learn that Richard Spruce, who obtained numerous

* *Beiträge zur Ethnographie und Sprachenkunde Amerikas, zumal Brasiliens.* Von Dr. Carl Friedrich Phil. von Martius. Leipzig, 1867. 2 vols.

vocabularies along the Amazon and its branches, gave them to the press; and there were in the hands of Von Tschudi more than a hundred vocabularies collected by the German naturalist, Johannes Natterer, in the interior of Brazil,* most of which I learn are still in manuscript. In default of material such as this, the classification of the tribes of Brazil must remain imperfect.

It is also a matter of much regret that no copy can be found of the work of the celebrated missionary, Alonso de Barcena, *Lexica et Precepta in quinque Indorum Linguis*, published at Lima, in 1590—if, indeed, it was ever really printed. It contained grammars of the Kechua, Aymara, Yunca, Puquina and Katamareña, (spoken by the Calchaquis). Of the two last mentioned idioms no other grammar is known, which makes the complete disappearance of this early printed book particularly unfortunate. Another Jesuit, Father Guillaume D'Étré, wrote out the catechism and instructions for the sacraments in eighteen languages of eastern Peru and the upper Orinoco;† but this, too, seems lost.

Of late years no one has paid such fruitful attention to the relationship and classification of the South American tribes and languages as M. Lucien Adam. Although I have not in all points followed his nomenclature, and have not throughout felt in accordance with his grouping, I have always placed my main

* Von Tschudi, *Organismus der Kechua Sprache*, s. 15, note.

† He was superior general of the missions on the Marañon and its branches about 1730. See *Lettres Edifiantes et Curieuses*, Tom. II., p. III, for his own description of his experiences and studies.

dependence on his work in the special fields he has selected—the three great South American families of the Amazon region, the Arawak (called by him the Maypure), the Carib, and the Tupi.*

The general plan which I shall adopt is rather for convenience of arranging the subject than for reasons based on similarities either of language or physical habitus. It is that which allows the presentation of the various stocks most in accordance with their geographic distribution and their historic associations.

It is as follows:

- I. The South Pacific group.
 1. The Columbian region.
 2. The Peruvian region.
- II. The South Atlantic group.
 1. The Amazonian region.
 2. The Pampean region.

* See especially his paper "Trois familles linguistiques des bassins de l'Amazone et de l'Orénoque," in the *Compte-Rendu du Congrès internationale des Américanistes*, 1888, p. 489 *sqq.*

I. THE SOUTH PACIFIC GROUP.

I. THE COLUMBIAN REGION.

THIS region includes the mountainous district in northwestern South America, west of the basin of the Orinoco and north of the equator—but without rigid adherence to these lines. The character of its culture differed considerably from that found in the Atlantic regions and was much more closely assimilated to that of Peru. Three lofty mountain chains traverse New Granada from north to south, the intervening valleys being beds of powerful rivers, rich in fish and with fertile banks. This configuration of the soil has exerted a profound influence on the life and migrations of the native inhabitants, severing them from the fellow-members of their race to the east and directing their roving in a north and south direction.

The productive valleys were no doubt densely populated; though we must regard as a wild extravagance the estimate of a modern writer that at the conquest the native inhabitants of New Granada reached “six to eight millions”*; and I hope that the historian Herrera was far beyond the truth when he asserted

*Joaquin Acosta, *Compendio Historico de la Nueva Granada*, p. 168. (Paris, 1848.)

that in Popayan alone, in a single year fifty thousand of the Indians died of starvation, five thousand were killed and eaten by the famishing multitude, and a hundred thousand perished from pestilence!*

1. *Tribes of the Isthmus and Adjacent Coast.*

At the discovery, the Isthmus of Panama was in the possession of the *Cunas* tribe, as they call themselves. They are the same to whom were applied later the names Darien Indians (Wafer), Tules, Cunacunas, Cuevas, Coybas, Mandingas, Bayanos, Irriacos, San Blas Indians, Chucunacos, Tucutis, etc.

They extended from the Gulf of Uraba and the river Atrato on the east to the river Chagres on the west. In that direction they were contiguous to the Guaymis, while on the right bank of the Atrato their neighbors were the Chocos.

The Cunas are slightly undersized (about 1.50), but symmetrical and vigorous. Their color is light, and individuals with chestnut or reddish hair and grey eyes have always been noted among them, and have erroneously been supposed to be albinos. Their skulls are markedly brachycephalic (88) and their faces broad.

In spite of the severe measures of the Spaniards, they have never been thoroughly reduced, and still manifest an unconquerable love of freedom and a wild life. When first met they lived in small villages composed of communal houses, raised maize and cotton, working the latter into garments for the women, and possessed some gold, which they obtained from

* *Hist. de las Indias Occidentales*, Dec. VII., Cap. XVI.

the mountain streams and by working auriferous veins. The men usually appeared naked and used poisoned arrows.

The Cuna language does not seem to be positively connected with any other stock, nor have dialects of it been discovered elsewhere. A number of verbal similarities have been pointed out^{*} with the Chibcha, and it has also a certain similarity to the Carib^{*}; but with our present knowledge it would be hasty to class it along with any other.

The *Changuina* or Dorasque tribes of the Isthmus lived latterly on the River Puan, a branch of the Telorio, and are said to have numbered 5000 persons, though but a few miserable remnants are surviving. They are lighter in color than the Guaymis, with whom they were in a constant state of quarreling. In earlier times they were bold warriors, lived by hunting, and were less cultured than their neighbors; yet a remarkable megalithic monument in the pueblo of Meza is attributed to them.[†] At the period of the conquest they dwelt in the high Sierras back of the volcano of Chiriqui and extended to the northern coast near Chiriqui Lagoon, where the River Chan-

^{*} Dr. Max Uhle gives a list of 26 Cuna words, with analogies in the Chibcha and its dialects. (*Compte-Rendu du Cong. Internat. Americanistes*, 1888, p. 485). Alphonse Pinart, who has published the best material on Cuna, is inclined to regard it as affiliated to the Carib. (*Vocabulario Castellano-Cuna*. Panama, 1882, and Paris, 1890.)

[†] A. L. Pinart, *Coleccion de Linguistica y Etnografia Americana*, Tom. IV., p. 17; also the same writer in *Revue d' Ethnographie*, 1887, p. 117, and *Vocabulario Castellano-Dorasque*. Paris, 1890.

guina-Aula (*aula*, in the Mosquito language, means river), still preserves their name. They were an independent warlike tribe, and gave the Spaniards much trouble. Finally, these broils led to their practical extinction. The last member of the Dorasque branch died in 1882, and few others remain.

CHANGUINA LINGUISTIC STOCK.

Chalivas, on upper Changuina-Aula.

Changuinas, near Bugaba.

Chumulus, near Caldera.

Dorasques, on the Rio Puan.

Gualacas, near San Francisco de Dolega.

Telusgies, near Rio Puan.

The *Chocos* were the first nation encountered in South America on passing beyond the territory of the Cunas. They occupied the eastern shore of the Gulf of Uraba, and much of the lower valley of the Atrato. Thence they extended westerly across the Sierra to the Pacific coast, which they probably occupied from the Gulf of San Miguel, in north latitude 8° , where some of them still live under the name of Sambos, down to the mouth of the San Juan River, about north latitude 4° , on the affluents of which stream are the Tados and Noanamas, speaking well-marked dialects of the tongue. To the east they reached the valley of the Cauca, in the province of Antioquia. The Tucuras, at the junction of the Sinu and the Rio Verde, are probably their easternmost branch.*

* On the Chocos consult *Zeitschrift für Ethnologie*, 1876, s. 359; Felipe Perez, *Jeografia del Estado del Cauca*, p. 229, sq. (Bogota, 1862.) The vocabulary of *Chami*, collected near Marmato by C. Greiffenstein, and published in *Zeitschrift für Ethnologie*, 1878,

Anthropologically, they resemble the Cunas, having brachycephalic skulls, with large faces, but are rather taller and of darker color. Here the resemblance ceases, for they are widely dissimilar in language, in customs and in temperament. Instead of being warlike and quarrelsome, they are mild and peaceable; they lived less in villages and communal houses than in single isolated huts. Most of them are now Catholics and cultivate the soil. They have little energy and live miserably. At the time of the conquest they were a trafficking people, obtaining salt from the saline springs and gold from the quartz lodes, which they exchanged with the tribes of the interior. Some of them were skilful in working the metal, and fine specimens of their products have been obtained from their ancestral tombs.

CHOCO LINGUISTIC STOCK.

Angaguedas, west of province of Cauca.

Cañasgordas, west of province of Cauca.

Caramantas, west of province of Cauca.

Chocos, on Rio Atrato.

Chamis, near Marmato.

Chiamus or *Chocamus*, on the Pacific.

Citaraes, on Rio Buei and Rio Buchado.

Murindoes.

Necodades.

Noanamas, on head-waters of Rio San Juan.

Paparos, between rivers Sapa and Puero.

Patoes.

Rio Verdes, on the Rio Verde.

p. 135, is Choco. The vocabulary of the Tucuras, given by Dr. Ernst in the *Verhandlungen der Berliner Anthropol. Gesell.*, 1887, p. 302, is quite pure Choco. The Chocos call their language *em-bera bede*, "the speech of men."

*Sambo*s, on Rio Sambo, south of Gulf of San Miguel.

Tados, head-waters of Rio San Juan.

Tucuras, on Rio Senu.

It is worth while recording the names and positions of the other native tribes along the northern coast at the time of the discovery, even if we are unable to identify their linguistic connections. An official report made in 1546 furnishes a part of this information.* At that time and previously the eastern shore of Venezuela was peopled by the Chirigotos, who are probably the Chagaragotos of later authors.† Their western neighbors were the Caracas, near the present city of that name. They were warlike, wove hamacs, poisoned their arrows, and wore ornaments of gold. The whole coast from Caracas to Lake Maracaibo was in possession of the Caquetios, who also wove hamacs, and dwelt in stationary villages. They were of milder disposition and friendly, and as a consequence were early enslaved and destroyed by the Spaniards. Even at the date of the Relation they had disappeared from the shore. It is possible that they fled far inland, and gave their name in later days to the river Caqueta.

Along the eastern border of Lake Maracaibo were the Onotes, "The Lords of the Lagoon," *Señores de la Laguna*, a fine race, whose women were the handsomest along the shore.‡ They lived in houses

* "Relacion de las tierras y provincias de la gobernacion de Venezuela (1546)," in Oviedo y Baños, *Historia de Venezuela*, Tom. II. Appendice. (Ed. Madrid, 1885.)

† Aristides Rojas, *Estudios Indigenos*, p. 46. (Caracas, 1878.)

‡ "Mas hermosas y agraciadas que las de otros de aquel conti-

built on piles in the lake, and fished in its waters with nets and hooks. They traded their fish for maize and yuca to the Bobures. These dwelt on the southern shore of the lake, and are distinguished as erecting temples, *mesquites adoratorios*, for their religious rites.* The Sierra on the west of the lake was the home of the warlike Coromochos.

These warriors probably belonged to the Goajiros, who then, as now, occupied the peninsula on the northwest of Lake Maracaibo.

It is not easy to say who were the Tirripis and Turbacos, who lived about the mouth of the Magdalena River, though the names remind us of the Chibcha stock. Approaching the Gulf of Darien from the east, we find the highlands and shores on its west peopled by the Caimanes. These undoubtedly belonged to the Cunas, as is proved by the words collected among them in 1820 by Joaquin Acosta.† The earliest linguistic evidence about their extension dates from a report in 1515,‡ in which the writer says that all along this coast, up to and beyond San Blas,

nente." This was the opinion of Alonzo de Ojeda, who saw them in 1499 and later. (Navarrete, *Viages*, Tom. III., p. 9). Their lacustrine villages reminded him so much of Venice (Venezia) that he named the country "Venezuela."

* According to Lares, the Bobures and Motilones lived adjacent, and to the north of the Timotes. The Motilones were of the Carib stock. See Dr. A. Ernst, in *Zeitschrift für Ethnologie*, 1885, p. 190.

† Joaquin Acosta, *Compend. Histor. de la Nueva Granada*, p. 31, note.

‡ Martin Fernandez de Enciso, *La Suma de Geografia*. (Sevilla, 1519.) This rare work is quoted by J. Acosta. Enciso was alguacil mayor of Castilla de Oro in 1515.

the natives call a man *uma* and a woman *ira*, which are words from the Cuna dialects.

In the mountainous district of Mérida, south of the plains in the interior from Lake Maracaibo, there still dwell the remains of a number of small bands speaking dialects of a stock which has been called from one of its principal members, the *Timote*. It has been asserted to display a relationship to the Chibcha, but the comparisons I have made do not reveal such connection. It seems to stand alone, as an independent tongue.

All the Timotes paid attention to agriculture, raising maize, pepper and esculent roots of the potato character. Those who lived in the warm regions painted their bodies red and went naked; while those in the uplands threw around them a square cotton blanket fastened at the waist. Some of them buried their dead in caves, as the Quindoraes on the banks of the Motatan. With them they placed small figures in terra cotta. The Mocoehies, living where caves are rare, built underground vaults for their dead, closing the entrance with a great stone.*

From the writings of Lares and Ernst I make the following list of the members of the

TIMOTE LINGUISTIC STOCK.

<i>Aricaguas.</i>	<i>Iguñños.</i>	<i>Mombunes.</i>	<i>Tabayones.</i>
<i>Aviamos.</i>	<i>Insumubies.</i>	<i>Mucuchaies.</i>	<i>Taparros.</i>
<i>Bailadores.</i>	<i>Jajies.</i>	<i>Mucunchies.</i>	<i>Tatuyes.</i>
<i>Canaguaes.</i>	<i>Miguries.</i>	<i>Mucurabaes.</i>	<i>Tiguinos.</i>

* See Jose Ignacio Lares, *Resumen de las Actas de la Academia Venezolana*, 1886, p. 37 (Caracas, 1886); and Dr. Ernst, in *Zeitschrift für Ethnologie*, 1885, s. 190.

<i>Chamas.</i>	<i>Mirripuyas.</i>	<i>Mucutuyes.</i>	<i>Tricaguas.</i>
<i>Escagueyes.</i>	<i>Mocochies.</i>	<i>Quindoraes.</i>	
<i>Guaraques.</i>	<i>Mocotos.</i>	<i>Quinos.</i>	
<i>Guaquis.</i>	<i>Mocombos.</i>	<i>Quiroraes.</i>	

Few of these names are found in the older writers. In the Taparros we recognize the "Zaparas," who, in the last century, lived in contiguity to the Goajiros of the adjacent peninsula.* The Mucuchis gave their name to an early settlement of that name in the province of Merida.† The prefix *muco* or *moco*, which is very common in place-names of that region, is believed by Lares to have a locative significance. Such names give approximately the extent of the dialects at the settlement of the country.

In the highlands near the present city of Caracas, and in the fertile valleys which surround the beautiful inland lake of Valencia to the southeast, were at the discovery a number of tribes whose names, Arbacos, Mariches, Merigotos, etc., give us no information as to their affinities. They are now extinct, and nothing of their languages has been preserved. All the more store do we set by the archæology of the district, about which valuable information has been contributed by Dr. G. Marcano.‡ He opened a number of burial mounds where the bones of the dead, after having been denuded of flesh, were interred, together with ornaments and utensils.

* G. Coleti, *Dizionario dell' America Meridionale*, s. v. (Venezia, 1771.) Not to be confounded with the Zaparos of the Marañon.

† *Ibid.*, s. v.

‡ G. Marcano, *Ethnographie Pre-Columbienne de Venezuela*. (Paris, 1889.)

These were in stone, bone and terra cotta, the only metal being gold in small quantity. The character of the work showed the existence of a culture belonging to the highest stage of polished stone. Many of the skulls were artificially deformed to a high degree, the frontal obliquity in some cases being double the normal. Add to this that there was present an almost unexampled prognathism, and we have crania quite without similars in other parts of the continent. When not deformed they were brachycephalic, and both series gave a respectable capacity, 1470 c. c.

2. *The Chibchas.*

Most of the writers on the Chibchas have spoken of them as a nation standing almost civilized in the midst of barbarous hordes, and without affinities to any other. Both of these statements are erroneous. The Chibchas proper, or Muyscas, are but one member of a numerous family of tribes which extended in both directions from the Isthmus of Panama, and thus had representatives in North as well as South America. The Chibcha language was much more widely disseminated throughout New Granada at the time of the discovery than later writers have appreciated. It was the general tongue of nearly all the provinces, and occupied the same position with reference to the other idioms that the Kechua did in Peru.* Indeed, most of the tribes in New Granada

* "La lingua *Muysca*, detta anticamente *Chybcha*, era la comune e generale in tuttigl' Indiani di quella Monarchia." Coleti, *Dizionario Storico-Geografico dell' America Meridionale*, Tom. II., p. 39. (Venezia, 1771.)

were recognized as members of this stock.* Nor were they so much above their neighbors in culture. Many of these also were tillers of the soil, weavers and spinners of cotton, diggers of gold in the quartz lodes, skilled in moulding and hammering it into artistic shapes, and known widely as energetic merchants.

No doubt the Chibchas had carried this culture to the highest point of all the family. Their home was on the southern confines of the stock, in the valleys of Bogota and Tunja, where their land extended from the fourth to the sixth degree of north latitude, about the head-waters of the Sogamoso branch of the Magdalena. Near the mouth of this river on its eastern shore, rises the Sierra of Santa Marta, overlooking the open sea, and continuing to the neck of the peninsula of Goajira. These mountains were the home time out of mind of the Aroacos, a tribe in a condition of barbarism, but not distantly related in language to the Chibchas.

When the Spaniards first undertook the conquest of this Sierra, they met with stubborn resistance from the Tayronas and Chimilas, who lived among these hills. They were energetic tribes, cultivating fields of maize, yucca, beans and cotton, which latter they wove and dyed for clothing. Not only were

* "Casi todos los pueblos del Nuevo Reyno de Granada son de Indios Mozcas." Alcedo, *Diccionario Geografico de America*, s. v. *Moscas*. "La lengua Mosca es como general en estendissima parte de aquel territorio; en cada nacion la hablan de distinta manera." J. Cassani, *Historia del Nuevo Reyno de Granada*, p. 48. (Madrid, 1741.) He especially names the Chitas, Guacicas, Morcotes and Tunebos as speaking Chibcha.

they versed in strategems, but they knew some deadly poison for their arrows.*

In later generations the Tayronas disappear entirely from history, but I think the suggestion is well founded that they merely became merged with the Chimilas, with whom they were always associated, and who still survive in the same locality as a civilized tribe. We have some information about their language.† It shows sufficient affinity with the Chibcha to justify me in classing the Tayronas and Chimilas in that group.

An imperfect vocabulary of the native residents of Siquisique in the state of Lara, formerly the province of Barquisimetro, inclines me to unite them with the Aroac branch of this stock, though their dialect is evidently a mixed one.‡

A still more interesting extension of this stock was that which it appears to have had at one time in the northern continent. A number of tribes beyond the straits, in the states of Panama and Costa Rica, were

* Herrera, *Historia de las Indias Occidentales*, Dec. IV., Lib. X., cap. 8.

† Rafael Celedon, *Gramatica de la Lengua Kōggaba*, Introd., p. xxiv. (*Bibliothèque Linguistique Américaine*.)

‡ The vocabulary is furnished by General Juan Thomas Perez, in the *Resumen de las Actas de la Academia Venezolana*, 1886, p. 54. I offer for comparison the following :

	SIQUISIQUE.	CHIBCHA-AROAC.
Sun,	<i>yuan,</i>	<i>yuia.</i>
Wife,	<i>esio,</i>	<i>sena.</i>
Fire,	<i>dueg,</i>	<i>gue.</i>
Water,	<i>ing,</i>	<i>ni.</i>
Snake,	<i>tub,</i>	<i>kābi.</i>

either filially connected or deeply influenced by the outposts of the Chibcha nation. These were the Guaymis in Veraguas, who possessed the soil from ocean to ocean, and the Talamancas of Costa Rica, who in a number of small sub-tribes extended quite to the boundaries of the present state of Nicaragua. It has been recently shown, and I think on satisfactory evidence, that their idioms contain a large number of Chibcha words, and of such a class that they could scarcely have been merely borrowed, but point to a prolonged admixture of stocks.* Along with these terms are others pointing to a different family of languages, perhaps, as has long been suspected, to some of the Carib dialects; but up to the present time they must be said not to have been identified.

Thus Lucien Adam has pointed out that the two groups of the Guaymi dialects differ as widely, as follows:

	MUOI-MUR- IRE-SAVANERO.	VALIENTE- GUAYMI-NORTENO.
Sun,	<i>cui,</i>	<i>nono, noana.</i>
Moon,	<i>dai,</i>	<i>so, go.</i>
Water,	<i>ci, ca,</i>	<i>ño, ñu.</i>
Man,	<i>cuia,</i>	<i>ni-togua.</i>
Woman,	<i>moima,</i>	<i>ni-uire.</i>
Eye,	<i>guagava,</i>	<i>ogua.</i>
Nose,	<i>se, chegua,</i>	<i>ni-doñ, domo.</i>
Foot,	<i>sera,</i>	<i>n-goto.</i>

* The connection of the Aroac (not Arawak) dialects with the Chibcha was, I believe, first pointed out by Friederich Müller, in his *Grundriss der Sprachwissenschaft*, Bd. IV., s. 189, note. The fact was also noted independently by Dr. Max Uhle, who added the Guaymis and Talamancas to the family. (*Compte Rendu du Congrès Internat. des Américanistes*, 1888, p. 466.)

Dr. Max Uhle, in a late essay, has collected numerous verbal identities between the various Guaymi and Talamanca dialects on the one hand, and the Aroac and Chibcha on the other, including most of the simple numerals and many words besides those which would be likely to be introduced by commerce. Not stopping with this, he has successfully developed a variety of laws of vowel and consonant changes in the dialects, which bring the resemblance of the two groups into strong relief and do away with much of their seeming diversity. Moreover, he points out that the terminations of the present and imperative are identical, and the placement of words in the sentence alike in both. These and his other arguments are sufficient, I think, to establish his thesis; and I am at greater pains to set it forth, as I regard as it one of unusual importance in its bearing on the relations which existed in prehistoric times between tribes along the boundary of the two continents.

As to the course of migration, I do not think that the discussion of the dialectic changes leaves any room for doubt. They all indicate attrition and loss of the original form as we trace them from South into North America; evidently the wandering hordes moved into the latter from the southern continent. So far, there is no evidence that any North American tribe migrated into South America.

To illustrate these points I quote from Uhle's tables the following:

Comparison of the Chibcha with the Costa Rican Dialects.

(T.=Talamanca. G.=Guaymi.)

	CHIBCHA.	COSTA RICA.
Head,	<i>zysqui,</i>	<i>dzekung, T., thokua, G.</i>
Ear,	<i>cuhuca,</i>	<i>kuku, T.</i>
Tongue,	<i>pcua,</i>	<i>ku, T.</i>
Breasts,	<i>chue,</i>	<i>tsu, T.</i>
Navel,	<i>mue,</i>	<i>mówo, T.</i>
Foot,	<i>quihyca,</i>	<i>ketscha, T.</i>
Bird,	<i>sue,</i>	<i>du, T., nukua, G.</i>
Fish,	<i>gua,</i>	<i>gua, G.</i>
Snake,	<i>tacbi,</i>	<i>thekebe, G.</i>
Ant,	<i>ize,</i>	<i>tsa, T.</i>
Maize,	<i>aba,</i>	<i>ep, T.</i>
Stone,	<i>hyca,</i>	<i>hak, T.</i>
Water,	<i>sie,</i>	<i>di, T., chi, G.</i>
Sun,	<i>sua,</i>	<i>chui, G.</i>
House,	<i>güe,</i>	<i>hu, T., xu, G.</i>
Comb,	<i>cuza,</i>	<i>kasch, T.</i>
One,	<i>ata,</i>	<i>et, T., ti, G.</i>
Two,	<i>boza,</i>	<i>bu, T., bu, G.</i>
Three,	<i>mica,</i>	<i>mia, T., mai, G.</i>

The numerous relics which since 1859 have been disinterred from the ancient sepulchres of Chiriqui may be attributed to the members of this stock; perhaps, as M. Pinart has suggested, to the ancestors of the Guaymis, or, as Dr. Berendt thought, to the Cunas or Coibas.* These graves are scattered in small groups or cemeteries, rarely more than ten acres in extent, over the Pacific slope of the province of Chiriqui. The similarity of the culture of their makers to that of the Chibchas has not failed to impress archæological experts. Thus, W. H. Holmes

* Pinart, *Bulletin de la Société de Géographie*, 1885; Berendt, in *Bull. of Amer. Geog. Society*, 1876, No. 2.

remarks in his admirable article on the "Art of Chiriqui," "In their burial customs, in the lack of enduring houses or temples, and in their use of gold, they were like the ancient peoples of middle and southern New Granada."*

These relics are in stone, in pottery of many varieties and forms, and in the metals gold, copper, silver and tin in various alloys. So large was the quantity of gold that from a single cemetery over fifty thousand dollars in value have been extracted. No wonder that Columbus and his companions gave to this region the appellation *Castillo del Oro*, Golden Castile.

Such a condition of civilization is in accord with the earliest descriptions of the Chiriqui tribes. When in 1521 Francisco Compañon overran their country, he found the Borucas and their neighbors living in villages surrounded with high wooden palisades, the posts firmly lashed together, making a solid wall of defence.†

The culture of the Chibchas has been portrayed by numerous writers, and it deserves to rank as next to that of the Nahuas and Kechuas, though in many respects inferior to both of these. Their chiefs held by succession through the female side, the matri-

*In *Sixth Annual Report of the Bureau of Ethnology*. Washington, 1888.

†Joaquin Acosta, *Compendio Historico de la Nueva Granada*, p. 77. When, in 1606, the missionary Melchor Hernandez visited Chiriqui lagoon, he found six distinct languages spoken on and near its shores by tribes whom he names as follows: Cothos, Borisques, Dorasques, Utelaes, Bugabaes, Zunes, Dolegas, Chagres, Zaribas, Dures. (*Id.*, p. 454.)

archal system prevailing throughout their tribes. Agriculture was diligently pursued, the products being maize, potatoes, yucca and cotton. Artificial irrigation by means of ditches was in extended use. Salt was prepared on a large scale by evaporation, and their skill in the manufacture of cotton cloth was notable. Copper and bronze were unknown, and all their tools and weapons were of wood and stone. In this respect they were in arrears of their not distant neighbors, the Kechuas. Gold, however, they had in quantity, and knew how to smelt it and to work it into vases and ornaments of actual beauty. The use of stone for building was unknown, and their finest structures were with wooden walls coated with clay and roofed with straw.

In spite of what has sometimes been brought forward, it is not likely that they had any method of writing, and much that has been advanced about their calendar is of doubtful correctness. They had neither the quipos of the Peruvians nor the picture-writing of the Mexicans. The carved stones which have sometimes been produced as a species of calendar were probably merely moulds for hammering gold into shape.

Quite a body of their mythologic legends have been preserved, replete with interest to the student of the religious sentiment of this race. They indicate an active imagination and may be regarded as quite authentic.

The Chibchas proper, as well as the Aroacos, were meso- or brachycephalic, the cephalic index ranging above 80. They were of moderate stature, dark in

color, the face broad, the eyes dark and often slightly oblique, the cheek-bones prominent and the general appearance not handsome.

CHIBCHA LINGUISTIC STOCK.

Aruacs (*Aroacos*), in Sierra Nevada de Santa Marta and on Rio Paramo.

Bintucuas, a sub-tribe of the Aruacs.

Borucas, sub-tribe of Talamancas.

Bribris, sub-tribe of Talamancas.

Bruncas, see *Borucas*.

Cabecars, sub-tribe of Talamancas.

Chibchas, on upper Rio Magdalena, near Bogota.

Chicamochas, about 4° N. lat.

Chimilas, in the sierra of Santa Marta.

Chitas or *Chiscas*, near Sierra de Morcote.

Duits, near Duitama.

Guacicos, east of Bogota, on head-waters of Rio Meta.

Guamacas, a sub-tribe of Aruacs.

Guaymis, on both slopes of the Cordillera, in Veraguas.

Köggabas, a sub-tribe of the Aruacs.

Morcotes, near San Juan de los Llanos.

Muois, a sub-tribe of the Guaymis.

Murires, sub-tribe of the Guaymis.

Muyscas, see *Chibchas*.

Sinsigas, in the sierra near Tunja.

Talamancas, in the sierra in Costa Rica.

Tayronas, in Sierra de Santa Marta.

Terrabas, a sub-tribe of Talamancas.

Tirribis, a sub-tribe of Talamancas.

Tucurriques, a sub-tribe of the Talamancas.

Tunebos, in the sierra east of Bogota.

Valientes, a sub-tribe of the Guaymis.

3. *The Paniquitas and Paezes.*

A number of tribes living to the north and west of the Chibchas seem to have belonged to one stock. They are mentioned by the older historians as acting

in alliance, as in constant war with the Chibchas, and several of them as speaking dialects of a tongue wholly different from the Chibchas. Their stage of culture was lower, but they were acquainted with the bow, the sling and the war-club, and had fixed habitations. I give the list of these presumably related tribes, and apply to the stock the name of one of the modern tribes which retain the language.*

PANIKUITA LINGUISTIC STOCK.

Canapeis, sub-tribe of Colimas (Herrera).

Colimas, on right bank of Magdalena, adjacent to the Musos.

Manipos, adjacent to the Pijoas.

Musos, on right bank of the Magdalena, adjacent and north of the Muyscas.

Nauras, on the Rio Carari.

Paezes, on the central Cordillera.

Panches, on the east bank of Magdalena, near Tocayma.

Paniquitas, between upper waters of the Magdalena and Cauca.

Pantagoros, on both shores of the Magdalena and in province of Quimbaya.

Pijaos, in Popayan, on the Cauca and Neyva.

My reasons for identifying the modern Paniquitas and Paezes with the ancient tribes named are, first, the identity of the location, and secondly, the presence of the initial syllable *pan* in the names of two of the principal extinct peoples, a word which in Paniquita means "mountain," and clearly refers to the position of their villages in the sierra, between the head-waters of the Cauca and Magdalena Rivers.

*The only information I have on the Paniquita dialect is that given in the *Revue de Linguistique*, July, 1879, by a missionary (name not furnished). It consists of a short vocabulary and some grammatical remarks.

Among the references in the older writers, I may mention that Herrera states that the language of the Panches was one of the most extended in that part of the country, and that the tribes speaking it almost surrounded the Muyscas;* and Piedrahita specifically adds that the Pijaos, the most powerful tribe in Popayan, whose territory extended from Cartago to the city of Popayan, along the valley of the Neyva, and quite to San Juan de los Llanos, belonged to the same stock as the Pantagoros.

Some fragments have been preserved from the mythology of the Musos, who lived about 24 leagues northwest of Santa Fe, on the right bank of the Magdalena. Their legends pointed for the home of their ancestors to the left or western side of the river. Here dwelt, lying in a position of eternal repose, the Creator, a shadow whose name was *Are*. Ages ago he carved for his amusement two figures in wood, a man and a woman, and threw them into the river. They rose from its waters as living beings, and marrying, became the ancestors of the human species.†

Most of these tribes are reported to have flattened artificially their heads, and to have burned the bodies of their dead, or, in Popayan, to have mummified them by long exposure to a slow fire.

The Paezes live on both slopes of the central Cordillera, across the valley of the Magdalena from Bogota, some two thousand in number, in twenty-one

* Herrera, *Descripcion de las Indias Occidentales*, Cap. XVI.

† Alcedo, *Diccionario Geografico*, s. v., Muzos.

villages. They prefer the high altitudes, and are a hardy set of hunters and mountaineers. In spite of the cold they go nearly naked, but what is rare among native Americans, they wear a hat of reeds or bark, resembling in this some Peruvian tribes. Nor are they devoid of skill in hammering gold into ornaments, and weaving fibres of the maguey into mats and cloths. One of their peculiar customs is to burn down a house whenever a birth or a death takes place in it. The harsh dialect they speak has been rendered accessible by a publication of Señor Uricoechea. Its practical identity with the Panequita is obvious from the following comparison:*

	PANEQUITA.	PAEZ.
Eye,	<i>yafi,</i>	<i>yafi.</i>
Hand,	<i>kousseh,</i>	<i>cose.</i>
House,	<i>iat,</i>	<i>yath.</i>
Man,	<i>pilsto,</i>	<i>piz, petam.</i>
Tongue,	<i>tunneh,</i>	<i>tonè.</i>
Tooth,	<i>kit,</i>	<i>quith.</i>
Two,	<i>hendsta,</i>	<i>enz.</i>
Three,	<i>tejta,</i>	<i>tec.</i>
Four,	<i>pansta,</i>	<i>panz.</i>

4. *South Columbian Tribes, Natives of Cauca, Coconucos, Barbacoas, Andaquis, Mocoas, Cañaris.*

In the states of Cauca and Antioquia there are scarcely any full-blood natives remaining, and the tribes after the conquest were so shifted about that it is difficult to know to which of them we should attribute the abundant remains of ancient art which

* *Vocabulario Paez-Castellano*, por Eujenio del Castillo i Oroscó. Con adiciones por Ezequiel Uricoechea. Paris, 1877. (Bibliothèque Linguistique Americaine.)

are scattered profusely over this region. There are numerous sepulchral tumuli, especially in the Frontino and Dabeiba districts, which yield a rich harvest to the antiquary. They contain gold figures, vases and ornaments, stone implements of uncommon perfection, mirrors of polished pyrites, and small images in stone and terra cotta. There are also remarkable ruins in the valley of the Rio de la Plata, an affluent of the upper Magdalena. They consist in colossal statues rudely carved from stone, and edifices of the same material, partly underground, the walls of large slabs, and the roof supported by cylindrical carved pillars. A few of these still remain intact, but the majority have been wrecked by the earthquakes and by the vandalism of treasure-hunters.*

In an attempt to restore the ancient ethnography of this region, Dr. Posada-Arango thinks the former tribes can be classed under three principal nations:†

1. The *Catios*, west of the river Cauca.
2. The *Nutabes*, on the right bank of the Cauca, in its central course.
3. The *Tahamies*, toward the east and south.

In addition to these, there are the Yamacies, near the present city of Saragossa.

According to the early records, these tribes lived in fixed habitations constructed of wood and roofed with

* Felipe Perez, *Geografia del Estado de Tolima*, p. 76 (Bogota, 1863); R. B. White, in *Journal of the Royal Geographical Society*, 1883, pp. 250-2.

† Dr. A. Posada-Arango, "Essai Ethnographique sur les Aborigenes de l'Etat d'Antioquia," in the *Bulletin de la Société Anthropol. de Paris*, 1871, p. 202.

thatch. They were cultivators of the soil, skilled in the manufacture of pottery and stone implements, and had as domestic animals parrots and a small species of dog (*perros de monte*). Their clothing was of cotton, and they were much given to wearing ornaments, many of which were of gold.

From the unfortunate absence of linguistic material, I am unable to classify these interesting peoples.

In the valleys of the Sierra south of the Paezes dwelt the *Guanucos*, described by the first explorers as a warlike people in an advanced stage of culture. Their houses were of stone, roofed with straw. The sun was worshipped with elaborate ceremonies, including choruses of virgins and the ministration of thousands of priests.* The dead were buried and the funeral solemnities associated with human sacrifice. At present the neighbors of the Paezes on the western slope of the Cordillera are the *Moguexes* or *Guambianos*, partially civilized and carrying on a rude agriculture. They are much given to dissolute dances to the sound of the marimba, and to stupefying themselves with stramonium, which they also use to catch fish.†

The informant of the Abbe Hervas, Señor Velasco, asserted that the *Guanucos* were a branch of the *Coconucos*, who dwelt near the foot of the mountain of that name in Popayan, and figure considerably in

* Thirty thousand, says Herrera, with the usual extravagance of the early writers (*Decadas de Indias*, Dec. VII., Lib. IV., cap. IV.)

† Leon Douay, in *Compte Rendu du Congrès des Americanistes*, 1888, p. 774, who adds a vocabulary of *Moguex*. The name is derived from *Mog*, vir.

some of the older histories.* Bollaert learned that some of them still survive, and obtained a few words of their language, which he was also told was the same as that of the Pubenanos.†. I have found by comparison that it is identical with that of the Moguexes and Totoros,‡ and I am therefore enabled to present the following group as members of what I shall call the

* Hervas, *Catologo de las Lenguas Conocidas*, Tom. I., p. 279. Father Juan de Ribera translated the Catechism into the Guanuca, but so far as I know, it was not printed.

† Bollaert, *Antiquarian and Ethnological Researches*, etc., pp. 6, 64, etc. The words he gives in Coconuca are:

IN MOGUEX.

Sun,	<i>puitchr</i> ,	<i>piuchr</i> .
Moon,	<i>puil</i> ,	<i>pulue</i> .
Stars,	<i>sil</i> ,	?
Chief,	<i>cashu</i> ,	?
Maize,	<i>bura</i> ,	<i>purat</i> .

Bollaert probably quoted these without acknowledgment from: Gen. Mosquera, *Phys. & Polit. Geog. of New Granada*, p. 45 (New York, 1853).

‡ My knowledge of the Totoro is obtained from an anonymous notice published by a missionary in the *Revue de Linguistique*, July, 1879. Its relationship to the group is at once seen by the following comparison:

TOTORO.

MOGUEX.

Man,	<i>mujel</i> ,	<i>muck</i> .
Woman,	<i>ishu</i> ,	<i>schut</i> .
Head,	<i>pushu</i> ,	<i>pusts</i> .
Eye,	<i>cap-tshal</i> ,	<i>cap</i> .
Mouth,	<i>trictrap</i> ,	<i>chidbchab</i> .
Nose,	<i>kim</i> ,	<i>kind</i> .
Arm,	<i>qual</i> ,	<i>cuald</i> .
Fingers,	<i>cambil</i> ,	<i>kambild</i> .

COCANUCA LINGUISTIC STOCK.

Coconucos, at the sources of the Rio Purase.

Guanucos, in the Sierra.

Guambianos, see *Moguexes*.

Moguexes, on the western slope of the Cordillera.

Pubenanos, adjacent to the Coconucos.

Mosqueras, sub-tribe of *Moguexes*.

Polindaras, head-waters of Rio Cauca.

Totoros, in the Sierra between the Magdalena and Cauca.

To these should probably be added the Conchucos and Guaycos, who appear to have been adjacent tribes speaking the same tongue, although also being familiar with the Kechua language.*

In the upper valleys of the rivers Daules, Chone and Tachi, there still survive some families of the "painted Indians," who were referred to by Cieza de Leon as *Manivis*, now usually called *Colorados*, but whose own name is *Sacchas*, men or people. They are naturally of a light yellow hue, some with light hair and eyes, but are accustomed to go naked and cover their skin with a reddish vegetable pigment, which on the face is laid on in decorative lines. Their language,* with which we have some acquaintance, appears to belong to the same family as that of the *Barbacoas*, to whom the Jesuit Father Luca della Cueva went as missionary in 1640, and that of the *Iscuandes* and the *Telembis*, all residing in the forests near the coast, between 1° and 2° north latitude.

* See Herrera, *Hist. de las Indias*, Dec. VI., Lib. VII., cap. V.

† The vocabulary was furnished by Bishop Thiel. It is edited with useful comments by Dr. Edward Seler in *Original-Mittheilungen aus der Ethnologischen Abtheilung der König. Museen zu Berlin*, No. I., s. 44, sq. (Berlin, 1885).

These are described by M. André, who visited them in 1880, as of mixed blood and reduced to a few hundreds, but still retaining something of their ancient tongue, of which he obtained a vocabulary of 23 words. The Cuaikeres he reports as also speaking this idiom.*

Velasco mentions that the Barbacoas, Telembis and Iscuandes formed a confederation governed by a council of nine members chosen equally from the three tribes.

To the south of the Telembis and adjoining the Kechua-speaking Morropas in the district of La Tola were the Cayapas, of whom some remnants remain, still preserving their native tongue. A vocabulary of it, obtained by H. Wilczynski, has recently been published.† On comparing it with the Colorado vocabulary secured by Bishop Thiel and edited by

*Ed. André, in *Le Tour du Monde*, 1883, p. 344. From this very meagre material I offer the following comparison:

	TELEMBI.	COLORADO.
Eye,	<i>cachu,</i>	<i>caco.</i>
Nose,	<i>quimpu,</i>	<i>quinfu.</i>
House,	<i>yall,</i>	<i>ya.</i>
Hand,	<i>ch'to,</i>	<i>te-de.</i>
Foot,	<i>mi-to,</i>	<i>ne-de.</i>
Mother,	<i>acua,</i>	<i>aya.</i>
Hair,	<i>aichi,</i>	<i>apichu.</i>

The terminal syllable *to* in the Telembi words for hand and foot appears to be the Colorado *té*, branch, which is also found in the Col. *té-michu*, finger *te-chili*, arm ornament, and again in the Telembi *t'raill*, arm.

† In the *Verhandlungen der Berliner Anthropol. Gesellschaft*, 1887, ss. 597-99.

Dr. Seler, it is clear that they are dialects of the same stock, as will be seen from these examples:*

	CAYAPA.	COLORADO.
Head,	<i>mishpuca,</i>	<i>richu.</i>
Hair,	<i>achua,</i>	<i>apichu.</i>
Eye,	<i>capucua,</i>	<i>caco.</i>
Fingers,	<i>fia-misho,</i>	<i>te-michu.</i>
Fire,	<i>nin-guma,</i>	<i>ni.</i>
Water,	<i>pi,</i>	<i>pi.</i>
Rain,	<i>shua,</i>	<i>chua-ptana.</i>
Tree,	<i>chi,</i>	<i>chi-tue.</i>
Night,	<i>quepe,</i>	<i>quepe.</i>
Sister,	<i>in-socki,</i>	<i>soque.</i>
House,	<i>ia,</i>	<i>ya.</i>
White,	<i>fiba,</i>	<i>fibaga.</i>
To sleep,	<i>casto,</i>	<i>catzoza.</i>
To drink,	<i>pi-cushno,</i>	<i>cuchi.</i>

The Cayapas are described as well-built, with oval faces and roman noses.†

As the Barbacoas were the first known and probably the most numerous member of this family, I shall select their name to apply to them all, and classify the group as follows:

BARBACOA LINGUISTIC STOCK.

Barbacoas, on Upper Patia and Telembi.

Cayapas, on coast near La Tola.

Colorados, on Daule, Chone and Tachi Rivers.

Cuaiqueres, on the coast about 1° N. Lat.

* Other analogies are undoubted, though less obvious. Thus in Cayopa, "man" is *liu-pula*; "woman," *su-pula*. In these words, the terminal *pula* is generic, and the prefixes are the Colorado *sona*, woman, abbreviated to *so* in the Colorado itself, (see Dr. Seler's article, p. 55); and the Col. *chilla*, male, which in the Spanish-American pronunciation, where *ll=y*, is close to *liu*.

† Bollaert, *Antiquarian and Ethnological Researches*, p. 82.

Iscuandes, on Rio Patia.

Manivis, head-waters of Rio Telembi.

Sacchas, see *Colorados*.

Telembis, on Rio Telembi.

I have, in obedience to a sense of caution, treated of this stock as separate from the Cocanuca; but the fragmentary vocabularies at my command offer a number of resemblances between the two, and I expect that ampler material will show increased analogies, probably to the extent of proving them branches of the same family tree.

In the roughest part of the Eastern Cordillera, about the head-waters of the two rivers Fragua, (between 1° and 2° north latitude), live the *Andaquis*. They are wild and warlike, and are the alleged guardians of the legendary *Indeguanu*, "House of the Sun," a cavern in which, according to local tradition, lies piled the untold gold of the ancient peoples.* At the time of the conquest their ancestors are said to have occupied the fertile lands between the Magdalena and Suaza rivers, especially the valley of San Augustin, where they constructed mysterious cyclopean edifices and subterranean temples, and carved colossal statues from the living rock. These have been described and portrayed by intelligent travelers, and give us a high opinion of the skill and intelligence of their builders.†

The only specimen I have found of the *Andaqui*

* Manuel I. Albis, in *Bulletin of the Amer. Ethnol. Soc.*, vol. I., p. 52.

† A. Codazzi in Felipe Perez, *Jeografia del Estado de Tolima*, pp. 81 sqq. (Bogota, 1863.)

language is the vocabulary collected by the Presbyter Albis. Its words show slight similarities to the Paniquita and the Chibcha,* but apparently it is at bottom an independent stock. The nation was divided into many sub-tribes, living in and along the eastern Cordillera, and on the banks of the rivers Orteguasa, Bodoquera, Pescado, Fragua and San Pedro, all tributaries of the Caqueta.

The home of the *Mocoas* is between 1° and 2° north lat. along the Rio de los Engaños or Yari, (whence they are sometimes called Engaños or Inganos), and other tributaries of the Caqueta.† They are partially civilized, and have seven or more villages near the town of Mocoa. They are the first natives encountered in descending the eastern slope of the Cordillera. Unfortunately, we have a very imperfect knowledge of their language, a few words reported by the Presbyter Albis being all I have seen. So many of them are borrowed from the Kechua, that I have no means of deciding whether the following list of the stock is correct or not:

MOCOA LINGUISTIC STOCK.

Almaguereños.

Engaños or Inganos.

Mesayas.

Mocoas.

Pastuzos.

Patias (?)

Sebondoyes.

* As tooth, Andaqui, *sicoga*; Chibcha, *sica*.
house, " *co-joe*; " *jñe*.

† Manuel P. Albis, in *Bull. of the Amer. Ethnol. Soc.*, Vol. I., pp. 55, sq. See also General T. C. de Mosquera, *Memoir on the Physical and Political Geography of New Granada*, p. 41 (New York, 1853).

Of these, the Patias dwelt on the lofty and sterile plain between the two chains of the Cordilleras in Popayan. The Sebondoyes had a village on the Putumayo, five leagues south of the Lake of Mocoa (Coleti).

The region around the Gulf of Guayaquil was conquered by the Inca Tupac Yupanqui about 1450.* The accounts say that it had previously been occupied by some five-and-twenty independent tribes, all of whom were brought under the dominion of the Kechuas and adopted their language. The most prominent of these were the *Cañaris*, whose homes were in the hot valleys near the coast. Before the arrival of the Incas they had a certain degree of cultivation, being skilled in the moulding of copper, which they worked with a different technique from the Kechuas. Many of their copper axes are ornamented with strange figures, perhaps totemic, cut into the metal. As much as five or six hundred pounds' weight of these axes has been taken from one of their tombs.† Some of the most beautiful gold work from the Peruvian territory has been found in modern times in this province, but was perhaps the work of Kechua rather than of Cañari artists.‡

The original language of the Cañaris, if it was other than the Kechua, appears to have been lost.

* Garcilasso de la Vega, *Commentarios Reales*, Lib. VIII., cap. 5. He calls the natives Huancavillcas.

† F. G. Suarez, *Estudio Historico sobre los Cañaris* (Quito, 1878). This author gives cuts of these axes, and their inscribed devices.

‡ For a description, with cuts, see M. L. Heuzey, "Le Trésor de Cuenca," in *La Gazette des Beaux-Arts*, August, 1870.

2. THE PERUVIAN REGION.

The difficulty of a linguistic classification of the tribes of the Peruvian region is presented in very formidable terms by the old writers. Cieza de Leon said of this portion of the continent: "They have such a variety of languages that there is almost a new language at every league in all parts of the country ;"* and Garcilasso de la Vega complains of the "confusion and multitude of languages," which gave the Incas so much trouble, and later so much impeded the labors of the missionaries.† An authority is quoted by Bollaert to the effect that in the vice-royalty of Quito alone there were more than forty distinct tongues, spoken in upwards of three hundred different dialects.‡

Like most such statements, these are gross exaggerations. In fact, from all the evidence which I have been able to find, the tribes in the inter-Andean valley, and on the coast, all the way from Quito, under the equator, to the desert of Atacama in 25° south latitude, belonged to probably four or at most five linguistic stocks. These are the Kechua, the Aymara, the Puquina, the Yunca, and the Atacameño. Of these, the first three were known in the early days of the conquest, as "the three general languages"—*lenguas generales*—of Peru, on account of their wide distribution. But it is quite likely, as

* *Cronica del Peru*, Pt. I., cap. cxvi.

† *Comentarios Reales de los Incas*, Lib. VII., cap. 3.

‡ *Antiquarian, Ethnological and other Researches, in New Granada, Ecuador, Peru and Chili*, p. 101, (London, 1860).

I shall show later, that the Aymara was a dialect, and not an independent stock.

1. *The Kechuas.*

The Kechua in its various dialects, was spoken by an unbroken chain of tribes for nearly two thousand miles from north to south; that is, from 3° north of the equator to 32° south latitude. Its influence can be traced over a far wider area. In the dialects of Popayan in Ecuador, in those on the Rio Putumayo and Rio Napo, in those on the Ucayali and still further east, on the banks of the Beni and Mamore, in the Moxa of the Bolivian highlands, and southeast quite to the languages of the Pampas, do we find numerous words clearly borrowed from this widespread stock.

This dissemination was due much more to culture than to conquest. It was a tribute to the intellectual superiority, the higher civilization, of this remarkable people, as is evident by the character of the words borrowed. It is a historic error to suppose that the extension of the Kechua was the result of the victories of the Incas. These occurred but a few centuries before the arrival of the Spaniards, and their influence was not great on the native tongues, as even the panegyrist of the Incas, Garcilasso de la Vega, confesses.* The opinion of Von Tschudi was so positive on this point that he says: "With a few unimportant exceptions, wherever the Kechua was

* He complains that the languages which the Incas tried to suppress, had, since their downfall, arisen as vigorous as ever, *Comentarios Reales de los Incas*, Lib. VII., cap. 3.

spoken at the time of the conquest, it had been spoken thousands of years before the Inca dynasty began.”* The assertion of Garcilasso de la Vega, that the Inca gens had a language of its own, has been shown to be an error.†

Where should we look for the starting-point, the “cradle,” of the far-spread Kechua stock? The traditions of the Incas pointed to the shores and islands of Lake Titicaca as the birthplace of their remotest ancestors; but as Markham has abundantly shown, this was a pure myth. He himself is decidedly of the opinion that we must search for the cradle of the stock in the district of Cuzco, perhaps not far from Paucartambo, “the House of the Dawning,” to which other venerable Incarian legends assigned the scene of the creation of their common ancestors.‡

But there are many reasons, and to me satisfactory ones, for believing that the first Kechuas appeared in South America at the extreme north of the region they later occupied, and that the course of their migration was constantly from north to south. This was also the opinion of the learned Von Tschudi. He traces the early wandering of the Kechua tribes from the vicinity of Quito to the district between the Andes and the upper Marañon, thence in the direc-

* *Organismus der Khetsua Sprache*, s. 64 (Leipzig, 1884).

† See von Tschudi, *Organismus der Khetsua Sprache*, s. 65. It is to be regretted that in the face of the conclusive proof to the contrary, Dr. Middendorf repeats as correct the statement of Garcilasso de la Vega (*Ollanta, Einleitung*, s. 15, note).

‡ See his Introduction to the *Travels of Pedro Cieza de Leon*, p. xxii. (London, 1864).

tion of Huaraz, and so gradually southward, following the inter-Andean plateau, to the northern shore of Lake Titicaca. There they encountered warlike tribes who put a stop to their further progress in that direction until the rise of the Inca dynasty, who pushed their conquests toward the south and west.

The grounds for this opinion are largely linguistic.* In his exhaustive analysis of the Kechua language, Von Tschudi found its most archaic forms in the extreme north, in the dialects of Quito and Chinchasuyu. This is also my own impression from the comparison of the northern and southern dialects. For instance, in the Chinchaya (northern), the word for water is *yacu*, while the southern dialects employ *yacu* in the sense of "flowing water," or river, and for water in general adopted the word *unu*, apparently from the Arawak stock. Now, as Karl von den Steinen argues in a similar instance, we can understand how a river could be called "water," but not how drinking water could be called "river;" and therefore we must assume that the original sense of *yacu* was simply "water," and that the tribes who retained this meaning had the more archaic vocabulary.†

* See his *Organismus der Khetsua Sprache*, ss. 64-66.

† The Chinchaya dialect is preserved (insufficiently) by Father Juan de Figueredo in an Appendix to Torres-Rubio, *Arte de la Lengua Quichua*, edition of Lima, 1701. It retained the sounds of *g* and *l*, not known in southern Kechua. The differences in the vocabularies of the two are apparent rather than real. Thus the Chin. *rupay*, sun, is the K. for sun's heat (ardor del sol); Chin. *caclla*, face, is K. *cacella*, cheeks. Markham is decidedly in error in saying that the Chinchaya dialect "differed very considerably from that of the Incas" (*Journal Royal Geog. Soc.*, 1871, p. 316).

Mr. Markham indeed says: "In my opinion there is no sufficient evidence that the people of Quito did speak Quichua previous to the Inca conquest;" and he quotes Cieza de Leon to the effect that at the time of the Spanish conquest they had a tongue of their own.* I have, however, shown how untrustworthy Cieza de Leon's statements are on such subjects; and what is conclusive, there were Kechua-speaking tribes living at the north who never were subjugated by the Incas. Such for instance were the Malabas, whom Stevenson, when visiting that region in 1815, found living in a wild state on San Miguel river, a branch of the Esmeraldas.† This is also true, according to the observations of Stübel, of the natives of Tucas de Santiago in the province of Pasto in Ecuador.‡

This opinion is further supported by a strong consensus of ancient tradition, which, in spite of its vagueness, certainly carries some weight. Many of the southern Kechua tribes referred for their origin to the extreme northwest as known to them, to the ancient city of Lambayeque on the Pacific coast, a locality which, according to Bastian,§ held a place in their traditions equivalent to that of Culiacan, "the Home of the Ancestors," in the legendary lore of the Aztecs.

* Introduction to his translation of Cieza de Leon, p. xlvii, note.

† Bollaert, *Antiquarian and Ethnological Researches*, p. 81.

‡ Von Tschudi, *Organismus der Khetsua Sprache*, s. 66. Hervas was also of the opinion that both Quitu and Scyra were Kechua dialects (*Catalogo de las Lenguas Conocidas*, Tom. I., p. 276).

§ A. Bastian, *Die Culturländer des Alten Americas*, Bd. II., s. 93.

The legends of the ancient Quitus have been preserved in the work of Juan de Velasco, and although they are dismissed with small respect by Markham, I am myself of the opinion that there is both external and internal evidence to justify us in accepting them as at least genuine native productions. They relate that at a remote epoch two Kechua-speaking tribes, the Mantas on the south, and the Caras on the north, occupied the coast from the Gulf of Guayaquil to the Esmeraldas River. The Caras were the elder, and its ancestors had reached that part of the coast in rafts and canoes from some more northern home. For many generations they remained a maritime people, but at length followed up the Esmeraldas and its affluents until they reached the vicinity of Quito, where they developed into a powerful nation under the rule of their *scyri*, or chiefs. Of these they claimed a dynasty of nineteen previous to the conquest of their territory by the Inca Huayna Capac. They inherited in the male line, and were monogamous to the extent that the issue of only one of their wives could be regarded as legal heirs.* They did not bury their dead, as did the southern Kechuas, but placed them on the surface of the soil and constructed a stone mound or tomb, called *tola*, over the remains, resembling in this the Aymaras.

The extent of the Kechua tongue to the north has

*Juan de Velasco, *Histoire du Royaume de Quito*, pp. 11-21, sq. (Ed. Ternaux-Compans, Paris, 1840.) But Cieza de Leon's expressions imply the existence of the matriarchal system among them. See Markham's translation, p. 83, note. Some claim that the Quitus were a different, and, in their locality, a more ancient tribe than the Caras.

not been accurately defined. Under the name *Yumbos*, or *Yumbos de Guerra*, the old Relations included various tribes in the Quito region who had not been reduced by the Spanish Conquistadores.* A recent traveler, M. André, states that the Yumbos belong to the family of the Quitus, and include the tribes of the Cayapas, Colorados and Mangaches.† Of these, the Cayapas and Colorados, as I have shown, belong to the Barbacoa stock, though the term *Colorados* "painted," is applied to so many tribes that it is not clear which is meant. The geographer Villavicencio observes that "the Napos, Canelos, Intags, Nanegales and Gualeas, collectively called Yumbos, all speak dialects of the Kechua." The modern Canelos he describes as a cross between the ancient Yumbos and the Jivaros, to whom they are now neighbors, while the modern Quitos adjoin the Zaparos. Their language, however, he asserts, has retained its purity.‡

Whether we should include in this stock the Macas, who dwell on the eastern slope of the Andes a few degrees south of the equator, is not clear, as I have found no vocabularies. Velasco refers to them

* *Relaciones Geograficas de Indias*. Peru. Tom. I., p. 19. (Madrid, 1881.)

† In *Le Tour du Monde*, 1883, p. 406. The word *Yumbo* appears to be derived from the Paez *yombo*, river, and was applied to the down-stream Indians.

‡ "Casi tal como lo enseñaron los conquistadores." Manuel Villavicencio, *Geografia de la Republica del Ecuador*, pp. 168, 354, 413, etc. (New York, 1858.) According to Dr. Middendorf, the limit of the Incarial power (which, however, is not identical in this region with that of the Kechua tongue), was the Blue river, the Rio Ancasmayu, an affluent of the upper Patia. (*Ollanta, Einleitung*, s. 5. Berlin, 1890.)

as a part of the Scyra stock, and they are in the Kechua region. Mr. Buckley, who visited them a few years ago, describes them as divided into small tribes, constantly at war with each other. Their weapons are spears and blow-pipes with poisoned arrows. Hunting is their principal business, but they also raise some maize, yucca and tobacco. Polygamy prevails along with the patriarchal system, the son inheriting the property of his father. Some rude pottery is manufactured, and their huts of palm leaves are neatly constructed. Like the Jívaros, they prepare the heads of the dead, and sometimes a man will kill one of his wives if he takes a fancy that her head would look particularly ornamental thus preserved.*

The southern limit of the Kechua tongue, before the Spanish conquest, has been variously put by different writers; but I think we can safely adopt Coquimbo, in south latitude 30° , as practically the boundary of the stock. We are informed that in 1593 the priests addressed their congregations in Kechua at this place,† and in the same generation the missionary Valdivia names it as the northern limit of the Araucanian.‡ Doubtless, however, it was spoken by outlying colonies as far south as the river Maule, in south latitude 35° , which other writers assign as the limit of the conquests of the Incas.

*Mr. C. Buckley, "Notes on the Macas Indians of Ecuador," in *Journal of the Anthropological Institute*, 1874, pp. 29, sqq.

†References in Waitz, *Anthropologie der Naturvölker*, Bd. III., s. 492.

‡*Arte de la Lengua Chilena*, Introd. (Lima, 1606.)

Cieza de Leon and other early Spanish writers frequently refer to the general physical sameness of the Peruvian tribes. They found all of them somewhat undersized, brown in color, beardless, and of but moderate muscular force.

The craniology of Peru offers peculiar difficulties. It was the policy of the rulers to remove large numbers of conquered tribes to distant portions of the realm in order to render the population more homogeneous. This led to a constant blending of physical traits. Furthermore, nowhere on the continent do we find skulls presenting more grotesque artificial deformities, which render it difficult to decide upon their normal form. When the latter element is carefully excluded, we still find a conflicting diversity in the results of measurements. Of 245 Peruvian crania in the collection of the Academy of Natural Sciences, Philadelphia, 168 are brachycephalic, 50 are dolichocephalic, and 27 mesocephalic. Of 13 from near Arica, all but one are dolichocephalic. Of 104 from Pachacamac, 93 are brachycephalic and none dolichocephalic. It is evident that along the coast there lived tribes of contrasted skull forms. From the material at hand I should say that the dividing line was near Pisco, those south of that point having elongated, those north of it rounded heads. The true Kechuas and Aymaras are meso or brachycephalic. The crania from the celebrated cemetery of Ancon, which is situated on the coast near Lima, are mostly deformed, but when obtained in natural form prove the population to have been mesocephalic, with rounded orbits (megasemes) and narrow prominent

noses (leptorhines). An average of six specimens yielded a cubical capacity of 1335 cub. cent.*

The cubical capacity of the Peruvian skulls from the coast generally averages remarkably low—lower than that of the Bushmen or Hottentots. Careful measurements give the capacity at 1230 cubic centimeters.† They almost reach the borders of microcephaly, which Broca placed at 1150 cubic centimeters.

Although the Spanish writers speak of the Inca as an autocratic despot, a careful analysis of the social organization of ancient Peru places it in the light of a government by a council of the gentes, quite in accordance with the system so familiar elsewhere on the continent. The Inca was a war-chief, elected by the council as an executive officer to carry out its decision, and had practically no initiative of his own. Associated with him, and nearly equal in power, was the *huillac huma*, or “speaking head,” who acted as president of the tribal council, and was the executive officer in the Inca’s absence. The totemic system still controlled the social life of the people, although it is evident that the idea of the family had begun to assert itself. The land continued to be owned by the gens or *ayllu*, and not by individuals.‡

* Paul Topinard, in *Revue d' Anthropologie*, Tome IV., pp. 65-67.

† Lucien Carr, *Fourth Report of the Peabody Museum of Archaeology*.

‡ I would especially refer to the admirable analysis of the Peruvian governmental system by Dr. Gustav Brühl, *Die Culturvölker Alt-Amerikas*, p. 335, sqq. (Cincinnati, 1887.) I regret that the learned Kechuist, Dr. E. W. Middendorf, had not studied this book.

Agriculture had reached its highest level in Peru among the native tribes. The soil was artificially enriched with manure and guano brought from the islands; extensive systems of irrigation were carried out, and implements of bronze, as spades and hoes, took the place of the ruder tools of stone or wood. The crops were maize, potatoes both white and sweet, yucca, peppers, tobacco and cotton. Of domestic animals the llama and paco were bred for their hair, for sacrifices and as beasts of burden, but not for draft, for riding nor for milking.* The herds often numbered many thousands. The Inca dog was a descendant of the wolf,† and monkeys, birds and guinea pigs were common pets.

Cotton and the hair of the various species of lama were spun and woven into a large variety of fabrics, often ornamented with geometric designs in color. The pottery was exceedingly varied in forms. Natural objects were imitated in clay with fidelity and expression, and when a desirable model was not at hand, the potter was an adept in moulding curious trick-jars that would not empty their contents in the expected direction, or would emit a strange note from the gurgling fluid, or such as could be used as whistles, or he could turn out terra-cotta flutes and

before he prepared his edition of the *Ollanta* drama (Berlin, 1890), or he would have modified many of the statements in its *Einleitung*.

* See J. J. von Tschudi, "Das Lama," in *Zeitschrift für Ethnologie*, 1885, s. 93.

† Dr. Nehring has shown that all the breeds of Peruvian dogs can be traced back to what is known as the Inca shepherd dog. *Zeitschrift für Ethnologie*, 1885, s. 520.

the like. Not less adroit were the artists in metal, especially in bronze and in gold and silver. The early writers are filled with expressions of astonishment at the amount, variety and beauty of the Incarian gold work. Its amount we may well credit when we are told that the value of the precious metals shipped to Spain within twenty-five years after the conquest was four hundred million ducats of gold. There are specimens enough remaining to judge of its artistic designs. They are quite ingenious and show dexterous manipulation, but rarely hint at a sense of the beautiful.

Peruvian architecture was peculiar and imposing. It showed no trace of an inspiration from Yucatan or Mexico. Its special features were cyclopean walls of huge stones fitted together without mortar; structures of several stories in height, not erected upon tumuli or pyramids; the doors narrowing in breadth toward the top; the absence of pillars or arches; the avoidance of exterior and mural decoration; the artistic disposition of niches in the walls; and the extreme solidity of the foundations. These points show that Inca architecture was not derived from that north of the isthmus of Panama. In the decorative effects of the art they were deficient; neither their sculpture in stone nor their mural paintings at all equalled those of Yucatan.

The only plan they had devised to record or to recall ideas was by means of knotted strings of various colors and sizes, called quipus. These could have been nothing more than mere mnemonic aids, highly artificial and limited in their application.

The official religion was a worship of the sun; but along with it were carried the myths of Viracocha, the national hero-god, whom it is not difficult to identify with the personifications of light so common in American religions. The ceremonies of the cult were elaborate, and were not associated with the bloody sacrifices frequent in Yucatan and Mexico. Their mythology was rich, and many legends were current of the white and bearded Viracocha, the culture hero, who gave them their civilization, and of his emergence from the "house of the dawn." According to some authorities which appear to be trustworthy, the more intelligent of the Kechuas appear to have risen above object-worship, and to have advocated the belief in a single and incorporeal divinity.

A variety of ancestral worship also prevailed, that of the *pacarina*, or forefather of the *ayllu* or gens, idealized as the soul or essence of his descendants. The emblem worshipped was the actual body, called *malqui*, which was mummied and preserved with reverential care in sacred underground temples.

The morality of the Peruvians stood low. Their art relics abound in obscene devices and the portraiture of unnatural passions. We can scarcely err in seeing in them a nation which had been deteriorated by a long indulgence in debasing tastes.

The Kechua language is one of harsh phonetics, especially in the southern dialects, but of considerable linguistic development. The modifications of the theme are by means of suffixes, which are so numerous as to give it a flexibility and power of con-

veying slight shades of meaning rare in American tongues, and which Friederich Müller compares to that of the Osmanli Turks.* Its literature was by no means despicable. In spite of the absence of a method of writing, there was a large body of songs, legends and dramas preserved by oral communication and the quipus. A number of these have been published. Among them the drama of *Ollanta* is the most noteworthy. It appears to be a genuine aboriginal production, committed to writing soon after the conquest, and bears the marks of an appreciation of literary form higher than we might have expected.† The poems or *yaraveys*, usually turn on love for a theme, and often contain sentiments of force and delicacy.‡ Several excellent grammatical studies of the Kechua have appeared in recent years.§

KECHUA LINGUISTIC STOCK.

Ayahucas, south of Quito.

Canas, east of the Vilcañeta Pass.

Caras, on the coast from Charapoto to Cape San Francisco.

Casamarcas, on the head-waters of the Marañon.

Chachapuyas, on the right bank of the Marañon.

* *Grundriss der Sprachwissenschaft*, Bd. II., Abth. I., 370.

† A careful edition is that of G. Pacheco Zegarra, *Ollantai; Drame en Vers Quechuas du Temps des Incas* (Paris, 1878); an English translation, quite faulty, was given by C. G. Markham (London, 1871); one in Kechua and German by Von Tschudi, and recently (1890) Dr. Middendorf's edition claims greater accuracy than its predecessors.

‡ Espada, *Yaravies Quiteños*. (Madrid, 1881.)

§ J. J. Von Tschudi, *Organismus der Khetsua Sprache* (Leipzig, 1884); Dr. E. W. Middendorf, *Das Runa Simi, oder die Keshua Sprache*. (Leipzig, 1890.)

Chancas, near Huanta, in department Ayacucho.

Chichasuyus, in the inter-Andean valley, from Loxa to Cerro de Pasco.

Conchucus, near Huaraz.

Huacrachucus, on both banks of the gorge of the Marañon.

Huamachucus, on the upper Marañon.

Huancapampas, near Juan de Bracamoros.

Huancas, in the valley of Sausa.

Huancavillcas, on and near the river Guayaquil.

Huanucus, near Tiahuanuco.

Incas, between Río Apurimac and Paucartampu.

Iquichanos, near Huanta.

Kechuas, from Lake Apurimac to the Pampas.

Lamanos or *Lamistas*, about Truxillo.

Malabas, on Río San Miguel (a branch of the Esmeraldas).

Mantas, on the coast north of the Gulf of Guayaquil.

Morochucos, in the department of Ayacucho.

Omapachas, adjacent to the Rucanas.

Quitus, near Quito.

Rucanas, near the coast, about lat. 15°.

Yauyos, near Cañete.*

2. *The Aymaras.*

I have thought it best to treat of the Aymara as a distinct linguistic stock, although the evidence is steadily accumulating that it is, if not merely a dialect of the Kechua, then a jargon made up of the Kechua and other stocks. In the first place, the name "Aymara" appears to have been a misnomer, or, as Markham strongly puts it, a "deplorable blunder," of the Jesuit missionaries stationed at Juli.† The true Aymaras were an unimportant *ayllu* or gens

*The Yauyos spoke the Canqui dialect, which was somewhat akin to Aymara.

†See Markham's paper in *Journal of the Royal Geographical Society*, 1871, p. 309.

of the Kechuas, and lived in the valley of the Abancay, hundreds of miles from Juli. A number of them had been transported to Juli to work in the mines, and there had intermarried with women of the Colla and Lupaca tribes, native to that locality. The corrupt dialect of the children of these Aymara colonists was that to which the Jesuit, Ludovico Bertonio, gave the name Aymara, and in it, Markham claims, he wrote his grammar and dictionary.*

Its grammar and phonetics are closely analogous to those of the southern Kechua dialects, and about one-fourth of its vocabulary is clearly traceable to Kechua radicals. Moreover, the Colla, Lupaca, Pacasa and allied dialects of that region are considered by various authorities as derived from the Kechua. For these reasons, Markham, Von Tschudi, and later, Professor Steinthal, have pronounced in favor of the opinion that the so-called Aymara is a member of the Kechua linguistic stock.†

On the other hand, the decided majority of its radicals have no affinity with Kechua, and betray a preponderating influence of some other stock. What this may have been must be left for future investiga-

* *Arte de la Lengua Aymara*, Roma, 1603; *Vocabulario de la Lengua Aymara*, Juli, 1612. Both have been republished by Julius Platzmann, Leipzig, 1879.

† See Steinthal, "Das Verhältniss zwischen dem Ketschua und Aimara," in *Compte-Rendu du Congrès International des Américanistes*, 1888, p. 462. David Forbes reverses the ordinary view, and considers the Kechua language and culture as mixed and late products derived from an older Aymara civilization. See his article on the Aymara Indians in *Journal of the Ethnological Society of London*, 1870, p. 270, sqq.

tion. It does not seem to have been the Puquina; for although that tongue borrowed from both the Aymara and the pure Kechua dialects, its numerals indicate a stock radically apart from either of them.

The Aymara was spoken with the greatest purity and precision by the Pacasas; and next to these, by the Lupacas; and it was especially on these two dialects that Bertonio founded his Grammar, and not upon the mongrel dialect of the imported laborers, as Markham would have us believe.*

The physical traits of the Aymara Indians offer some peculiarities. These consist mainly in an unusual length of the trunk in proportion to the height, in a surprising development of the chest, and short extremities. The proportion of the thigh to the leg in length is under the average. The leg and calf are well developed, and the general muscular force good. The hands and feet are smaller even than is common in the American race. The skull has a tendency to dolichocephaly.† The unusual thoracic development is plainly attributable to the tenuity of the atmosphere breathed by these residents of heights varying from 4,000 to 17,000 feet above sea level. Making allowances for the results of this exposure, they do not differ materially from the general physical habits of the Kechuas.

* "Principalmente se enseña en este Arte la lengua Lupaca, la qual no es inferior a la Pacasa, que entre todas las lenguas Aymaras tiene el primer lugar." Bertonio, *Arte de la Lengua Aymara*, p. 10.

† For measurements, etc., see David Forbes, in *Journal of the London Ethnological Society*, October, 1870.

The location they occupied was generally to the south and east of the Kechuas, upon the plateau and western slopes of the Andes, from south latitude 15° to 20° , and through about six degrees of longitude. It may be said roughly to have been three hundred miles from north to south, and four hundred from east to west. The total native population of this area to-day is about six hundred thousand, two-thirds of whom are of pure blood, and the remainder mixed. Some of them dwell along the sea coast, but the majority are on the Bolivian plateau, the average altitude of which is more than twelve thousand feet above sea level.

The old writers furnish us very little information about the Aymaras. At the time of the discovery they were subject to the Kechuas and had long been thus dependent. Many, however, believe that they were the creators or inspirers of the civilization which the Kechuas extended so widely over the western coast. Certain it is that the traditions of the latter relate that their first king and the founder of their higher culture, Manco Capac, journeyed northward from his home on the shores of Lake Titicaca, which was situated in Aymara territory. From the white foam of this inland sea rose the Kechua culture-hero Viracocha, who brought them the knowledge of useful arts and the mysteries of their cult.

On the cold plain, higher than the summit of the Jungfrau, which borders this elevated sea are also found the enigmatical ruins of Tiahuanaco, much the most remarkable of any in America. They are the remains of imposing edifices of stone, the cyclo-

pean blocks polished and adjusted so nicely one to the other that a knife-blade cannot be inserted in the joint.* In architectural character they differ widely from the remains of Incarian structures. The walls are decorated with bas-reliefs, there are remains of columns, the doors have parallel and not sloping sides, all angles are right angles, and large statues in basalt were part of the ornamentation. In these respects we recognize a different inspiration from that which governed the architecture of the Kechuas.†

No tradition records the builders of these strange structures. No one occupied them at the time of the conquest. When first heard of, they were lonely ruins as they are to-day, whose designers and whose purposes were alike unknown. The sepulchral structures of the Aymaras also differed from those of the Incas. They were not underground vaults, but stone structures erected on the surface, with small doors through which the corpse was placed in the tomb. They were called *chulpas*, and in construction resembled the *tolas* of the Quitus. Sometimes they are in large groups, as the *Pataca Chulpa*, "field of a hundred tombs," in the province of Carancas.‡

* One of the most satisfactory descriptions of them is by E. G. Squier, *Travels in Peru*, Chaps. XV., XVI. (New York, 1877).

† The observations of David Forbes on the present architecture of the Aymaras lend strong support to his theory that the structures of Tiahuanuco, if not projected by that nation, were carried out by Aymara architects and workmen. See his remarks in *Jour. of the London Ethnol. Soc.*, 1870, p. 259.

‡ D'Orbigny, *L'Homme Americain*, Tome I., p. 309.

AYMARA LINGUISTIC STOCK.

Canas, in the Sierra of the province so-called, east of Cuzco.

Canchis, in the lowlands of the province of Canas.

Carancas, south of Lake Titicaca.

Charcas, between Lakes Aullaga and Paria.

Collas, or *Collaguas*, north of Lake Titicaca.

Lupacas, west of Lake Titicaca, extending to Rio Desaguadero.

Pacasas, occupied the eastern shore of Lake Titicaca.

Quillaguas, on part of the southern shore of Lake Titicaca.

3. *The Puquinas.*

The Puquinas are also known under the names Urus or Uros, Hunos and Ochozomas. They formerly lived on the islands and shores of Lake Titicaca, in the neighborhood of Pucarini, and in several villages of the diocese of Lima. Oliva avers that some of them were found on the coast near Lambayeque.* If this is correct, they had doubtless been transported there by either the Incas or the Spanish authorities. They are uniformly spoken of as low in culture, shy of strangers and dull in intelligence. Acosta pretends that they were so brutish that they did not claim to be men.† Garcilasso de la Vega calls them rude and stupid.‡ Alcedo, writing in the latter half of the eighteenth century, states that those on the islands had, against their will, been removed to the mainland, where they dwelt in gloomy caves and in holes in the ground covered with reeds, and depended on fishing for a subsistence.

* Quoted by A. Bastian.

† "Son estos Uros tan brutales que ellos mismos no se tienen por hombres." Acosta, *Historia de las Indias*, p. 62 (Ed. 1591).

‡ "Los Indios Puquinas . . . son rudos y torpes." La Vega, *Comentarios Reales de los Incas*, Lib. VII., cap. 4.

They are alleged to have been jealous about their language, and unwilling for any stranger to learn it. Their religious exercises were conducted in Kechua, with which they were all more or less acquainted. The only specimen of their tongue in modern treatises is the Lord's Prayer, printed by Hervas and copied by Adelung.* On it Hervas based the opinion that the Puquina was an independent stock. The editors of the "Mithridates" seemed to incline to the belief that it was related to the Aymara, and this opinion was fully adopted by Clement L. Markham, who pronounced it "a very rude dialect of the Lupaca,"† in which he was followed by the learned Von Tschudi.‡

None of these authorities had other material than the *Pater Noster* referred to. Hervas credits it to a work of the missionary Geronimo de Ore, which it is evident that neither he nor any of the other writers named had ever seen, as they all speak of the specimen as the only printed example of the tongue. This work is the *Rituale seu Manuale Peruanum*, published at Naples in 1607. It contains about thirty pages in the Puquina tongue, with translations into Aymara, Kechua, Spanish and Latin, and thus forms a mine of material for the student. Though rare, a copy of it is in the Bibliothéque Nationale at Paris, and is thus readily accessible. I have published a number of extracts from its Puquina render-

* *Mithridates*, Theil III., Abth. II., ss. 548-550.

† In the *Journal of the Royal Geographical Society*, 1871, p. 305.

‡ In his *Organismus der Ketschua Sprache*, s. 76 (Leipzig, 1884).

ings in the *Proceedings of the American Philosophical Society* for 1890. They are sufficient to show that while this language borrowed many terms, especially those referring to religion and culture, from the neighboring Kechua and Aymara dialects, these were but additions to a primitive stock fundamentally different from either of them.

The dissimilarity of the three tongues is well seen in their numerals, which are as follows:

	KECHUA.	AYMARA.	PUQUINA.
One,	<i>huc,</i>	<i>mayni,</i>	<i>pesc.</i>
Two,	<i>iscay,</i>	<i>pani,</i>	<i>so.</i>
Three,	<i>quimsa,</i>	<i>quimsa,</i>	<i>capa.</i>
Four,	<i>tahua,</i>	<i>pusi,</i>	<i>sper.</i>
Five,	<i>pichka,</i>	<i>pisca,</i>	<i>tacpa.</i>
Six,	<i>soccta,</i>	<i>chocta,</i>	<i>chichun.</i>
Seven,	<i>canchis,</i>	<i>pa-callco,</i>	<i>stu.</i>
Eight,	<i>pusacc,</i>	<i>quimsa-callco,</i>	<i>quina.</i>
Nine,	<i>iscon,</i>	<i>llalla-tunca,</i>	<i>checa.</i>
Ten,	<i>chunca,</i>	<i>tunca,</i>	<i>scata.</i>

In these lists the Aymara numerals, *one*, *two* and *four* are independent; *three*, *five*, *six* and *ten* are taken from the Kechua; and the remaining three are compound, *pa-callco*, being 2+5; *quimsa-callco*, 3+5; and *llalla-tunca* meaning "less than ten." *Callco* is derived from the word for "foot," the counting being with the toes. On the other hand, there is not a single numeral in the Puquina which can be derived from either Kechua or Aymara; and what is more remarkable, there is apparently not one which is compounded.

It remains puzzling to me why the Puquina, which seems to have been spoken only by a few wretched

villagers about Lake Titicaca, should have been classed by writers in the sixteenth century as one of the *lenguas generales* of Peru. Not only does Ore refer to it by this term, but in one of the official *Relaciones Geograficas* written in 1582, it is mentioned as "one of the three general languages of this kingdom."* This would seem to indicate that at that period it had a wider extension than we can now trace.

4. *The Yuncas.*

The Yuncas occupied the hot valleys near the sea between south latitude 5° and 10°, their capital being in the vicinity of the present city of Truxillo. Their tongue belongs to an entirely different stock from the Kechua, and was not influenced by it. It still survives in a few sequestered valleys. The extreme difficulty of its phonetics aided to prevent its extension.†

There is little doubt but that the Yuncas immigrated to their locality at some not very distant period before the conquest. According to their own traditions their ancestors journeyed down the coast in their canoes from a home to the north, until they reached the port of Truxillo.‡ Here they settled and in later years constructed the enormous palace known as the *Gran Chimu*, whose massive brick walls, spacious terraces, vast galleries and fronts

* *Relaciones Geograficas de Indias*. Peru, Tom. I., p. 82. (Madrid, 1881.)

† Fernando de la Carrera, *Arte de la Lengua Yunga*. (Lima 1644, reprint, Lima, 1880.)

‡ See Von Tschudi, *Die Kechua Sprache*, p. 83, 84.

decorated with bas-reliefs and rich frescoes, are still the wonder and admiration of travelers.*

Near by, in the valley of Chicama and vicinity, they constructed capacious reservoirs and canals for irrigation which watered their well-tilled fields, and were so solidly constructed that some of them have been utilized by enterprising planters in this generation. Doubtless some of these were the work of the Incas after their conquest of this valley by the Inca Pachacutec, as is related by Garcilasso de la Vega,† but the fact that the Chimus were even before that date famed for their expertness in the working of metals and the fashioning of jewels and vases in silver and gold,‡ proves that they did not owe their culture to the instruction of the Quichuas.

The term *yunca-cuna* is a generic one in the Kechua language, and means simply "dwellers in the warm country," the *tierra caliente*, near the sea coast. It was more particularly applied to the Chimus near Truxillo, but included a number of other tribes, all of whom, it is said, spoke related dialects. Of the list which I append we are sure of the Mochicas or Chinchas, as the Yunca portion of Geronimo de Ore's work is in this dialect§; of the Estenes, Bastian has printed quite a full vocabulary which is nearly identical with the Yunca of Carrera;|| Mr.

* Charles Wiener, *Perou et Bolivie*, p. 98, seq. (Paris, 1880.)

† *Commentarios Reales*, Lib. VI., cap. 32.

‡ See the chapter on "The Art, Customs and Religion of the Chimus," in E. G. Squier's *Peru*, p. 170, sq. (New York, 1877.)

§ "En la lengua Mochica de los Yungas." Geronimo de Ore, *Rituale seu Manuale Peruanum*. (Neapoli, 1607.)

|| A. Bastian, *Die Culturländer Alt-Amer.* Bd. II.

Spruce obtained in 1863 a vocabulary of forty words from the Sechuras, proving them to belong to this stock;* but the dialects of the Colanes and Catacoas are said by the same authority to be now extinct. According to the information obtained by the Abbe Hervas, the "Colorados of Angamarca" also spoke a Yunca dialect,† but I have been unable to identify this particular tribe of "painted" Indians.

The location of the stock at the conquest may be said to have been from south lat. 4° to 10° ; and to have included the three departments of modern Peru called Ancachs, Libertad, and Piura.

YUNCA LINGUISTIC STOCK.

Catacaos, on the upper Rio Piura.

Chancos, on the coast south of the Mochicas.

Chimus, near Truxillo.

Chinchas, see *Mochicas*.

Colanes, on Rio Chiura, north of Payta.

Etenes, in the valleys south of Lambayeque.

Mochicas, at Mochi, near Truxillo.

Morropes, north of Lambayeque.

Sechuras, on Rio Piura.

5. *The Atacameños and Changos.*

In the valley of the river Loa, about 20° – 23° south latitude, and in the vicinity of Atacama, there still survive remnants of a tribe called Atacameños by the Spaniards, but by themselves *Lican-Antais*, people of the villages. Their language appears to be of

* In C. R. Markham's translation of Cieza de Leon, Introduction, p. xlii. (London, 1864.)

† *Catalogo de las Lenguas Conocidas*, Tome I., p. 274.

an independent stock, equally remote from that of the Kechuas and the Aymaras. Vocabularies of it have been preserved by various travelers, and the outlines of its grammar have been recently published by San-Roman.* From two of its numerals and some other indications Dr. Darapsky has connected it with the Aymara, which is also spoken in that vicinity.† The relationship, however, cannot be considered established, and the latest researches tend to sharpen the contrast between the *Cunza*, as it is sometimes called, and the Aymara.

The Lican-antais are fishermen and live in a condition of destitution. The aridity of the climate is unfavorable to agriculture. In physical habitus they are short, with dark complexions, flat broad noses and low foreheads.

D'Orbigny identifies the Likan-Antais with the Olipes, Lipes or Llipis of the older writers‡ (Garcilasso, etc). This, however, is open to doubt. Von Tschudi hazarded the opinion that the Atacameños were a remnant of the Calchaquis of Tucuman, who

*Dr. R. A. Philippi, *Reise durch die Wüste Atacama*, s. 66. (Halle, 1860.) J. J. von Tschudi, *Reisen durch Sud-Amerika*, Bd. V., s. 82-84. T. H. Moore, *Compte-Rendu du Congrès Internat. des Américanistes*, 1877, Vol. II., p. 44, sq. Francisco J. San-Roman, *La Lengua Cunza de los Naturales de Atacama* (Santiago de Chile, 1890). The word *cunza* in this tongue is the pronoun "our,"—the natives speak of *lengua cunza*, "our language." Tschudi gives the only text I know—two versions of the Lord's Prayer.

† "Con la nacion Aymara esta visiblemente emparentada la Atacameña." Dr. L. Darapsky, "Estudios Linguisticos Americanos," in the *Bulletin del Instituto Geog. Argentino*, 1890, p. 96.

‡ *L'Homme Americain*, Tom. II., p. 330.

had sought refuge from the Spaniards in this remote oasis on the coast.* I can find no positive support for this view, as we have no specimens of the language of the Calchaquis.

Immediately to the south of the Atacameños, bordering upon the sterile sands of the desert of Atacama, between south latitude 22° and 24° , are the *Changos*. In their country it never rains, and for food they depend entirely on the yield of the sea, fish, crustacea and edible algae. Like the Bushmen of the Kalihari desert, and doubtless for the same reason of insufficient nutrition, they are undersized, as a tribe perhaps of the shortest stature of any on the continent. The average of the males is four feet nine inches, and very few reach five feet.† They are, however, solidly built and vigorous. The color is dark, the nose straight and the eyes horizontal.

Nothing satisfactory is reported about their language, which is asserted to be different from the Aymara or any other stock. The tribe has been confounded by some writers with the Atacameños, and the Spaniards apparently included both under the term *Changos*; which is at present used as a term of depreciation. But both in location and appearance they are diverse. Whether this extends also to language, as is alleged, I have not the material to determine, and probably the tongue is extinct.‡

* *Organismus der Khetsua Sprache*, s. 71, and *Reisen*, Bd. V., s. 84.

† Alcide D'Orbigny, *L'Homme Americain*, Tome I., p. 334. (Paris, 1839.)

‡ "Entre los Changos no se conserva vestigio de lengua indijena alguna." F. J. San-Roman, *La Lengua Cunza*, p. 4.

II. THE SOUTH ATLANTIC GROUP.

I. THE AMAZONIAN REGION.

THOSE two mighty rivers, the Amazon and the Orinoco, belong to one hydrographic system, the upper affluents of the latter pouring their waters for six months of the year into the majestic expanse of the former. Together they drain over three million square miles of land,* clothed throughout with lush tropical vegetation and seamed by innumerable streams, offering natural and facile paths of intercommunication. It is not surprising, therefore, that we find linguistic stocks extended most widely over this vast area, each counting numerous members. Of them the most widely disseminated were the Tupi, the Tapuya, the Carib and the Arawak families, and to these I shall first give attention.

1. *The Tupis.*

Along the coast of Brazil and up the Amazon there is current a more or less corrupted native tongue called the "common language," *lingua geral*. It is derived mainly from the idiom of the Tupi, whose

*Wallace estimates the area of the Amazon basin alone, not including that of the Rio Tocantins, which he regards as a different system, at 2,300,000 square miles. (*Travels on the Amazon and Rio Negro*, p. 526.)

villages were found by the first discoverers along the seaboard, from the mouth of the La Plata to the Amazon and far up the stream of the latter. According to their traditions, which are supported by a comparison of their dialects, the Tupis wandered up the coast from the south. Their earlier home was between the Parana river and the Atlantic. There they called themselves *Carai*, the astute, a term they afterwards applied to the Spaniards, but later were given the name *Guaranis*, meaning warriors, by which they are generally known. They must have been very numerous, as a careful estimate made in 1612 computed those then living in the modern states of Corrientes and Uruguay at 365,000; a census which could not have been much exaggerated, as about a century later the Jesuits claimed to have over three hundred thousand Christianized and living in their "reductions;"* even to-day ninety per cent. of the population of Uruguay have Guarani blood in their veins.

The inroads of the Spaniards from the south and of the kidnapping Portuguese from the east, reduced their number greatly, and many bands sought safety in distant removals; thus the Chiriguanos moved far to the west and settled on the highlands of Bolivia, where they have increased their stock from four or five thousand to triple that number,† extending as

* See authorities in Von Martius, *Ethnographie und Sprachenkunde Amerikas*, Bd. I., s. 185. (Leipzig, 1867.)

† The origin of the Chiriguanos is related from authentic traditions by Nicolas del Techo, *Historia Provinciae Paraguariae*, Lib. XI., Cap. 2. The name Chiriguano means "cold," from the temperature of the upland region to which they removed.

far south as the Pilcomayo river. On the upper waters of the Parana were the Tapes, a nation so called from the name of their principal village. It is another form of Tupi, and means "town." They received the early missionaries willingly, and are complimented by these as being the most docile and intelligent of any of the nations of South America.*

The Tupi tribes did not extend north of the immediate banks of the Amazon, nor south of the Rio de la Plata. It would appear not improbable that they started from the central highlands where the Tapajoz on the north and the Paraguay on the south have their sources. Their main body followed the latter to the Atlantic, where the Tupis proper separated and moved up the coast of Brazil. This latter migration is believed to have been as late as a few hundred years before the discovery.†

Like the Tapuyas, the Tupis have a tendency to dolicocephaly, but it is less pronounced. They are less prognathic, the forehead is fuller and the color of the skin brighter. The hair is generally straight, but Pöppig saw many among the Cocamas of pure blood with wavy and even curly hair.‡

I have no hesitation in including in the Tupi family the Mundurucus, or Paris, on the upper Tapajoz. Their relationship was fully recognized by Professor

* "Nullam gentem Christianis moribus capessendis aut retiendis aptiorem in australi hoc America fuisse repertam." Nicolas del Techo, loc. cit., Lib. X., Cap. 9.

† Comp. von Martius, u. s., s. 179.

‡ *Reise in Chile und Peru*, Bd. II., s. 450.

Hartt, who was well acquainted with both dialects.* They are a superior stamp of men, tall, of athletic figures, light in color, their naked bodies artistically tattooed. Their women are skilled in weaving cotton hammocks, and the men pursue some agriculture, and manufacture handsome feather ornaments.

To the same family belong the Muras and Turas, in the swampy valley of the Madeira in its middle course, "an amphibious race of ichthyophagi," as they are called by Martius, savage and hostile, and depraved by the use of the *parica*, a narcotic, intoxicating snuff prepared from the dried seeds of the *Mimosa acacioides*. At the beginning of this century they were estimated at 12,000 bowmen; but this was doubtless a great exaggeration. Though their dialect differs widely from the *lingua geral*, the majority of their words are from Tupi roots.† Others are related to the language of the Moxos, and in the last century certain of their tribes lived in the immediate vicinity of these, and were brought into the "reductions" of the Moxos Indians by the Jesuit missionaries.‡ The tendency of their migrations has been down the Madeira.

* "Though widely different from the Tupi, ancient or modern, I am satisfied that the Mundurucú belongs to the same family." C. F. Hartt, in *Trans. of the Amer. Philological Association*, 1872, p. 75.

† Von Martius, *Ethnographie und Sprachenkunde Amerikas*, Bd. I., s. 412. A specimen of their vocalic and sonorous language is given by E. Teza, *Saggi Inediti di Lingue Americane*, p. 43. (Pisa, 1868.)

‡ G. Coleti, *Dizionario Storico-Geografico dell' America Meridionale*, Tom. II., p. 38. (Venezia, 1771.)

The tribes of this lineage in the extreme south of Brazil were numerous. The Guachaguis, corresponding apparently to the modern Guachis, are said by Lozano to speak a corrupt Guarani.* Vocabularies have been obtained by Castelnau and Natterer, which indicate only a remote resemblance. According to their own tradition, they migrated from near the Moxos in the Bolivian highlands.

The Gualachos, who spread from the river Iguaza to the sea coast, spoke a Guarani dialect in which the sounds of *f*, *j* and *l* were present, which, in pure Guarani, are absent. They built thatched houses divided into several rooms, and raised abundant harvests.†

The Omaguas and Cocamas, the most western of the Tupis, dwelling within the limits of Ecuador, had evidently profited by their contiguity to the civilization of Peru, as they are described by early travellers as familiar with gold, silver and copper, living in permanent villages connected by good roads, and cultivating large fields of cotton, maize and various food-plants. The art-forms which they produced and the prevalence of sun-worship, with rites similar to those of Peru, indicate the source of their more advanced culture. By some authors the Omaguas are stated to have migrated down the Rio Yupara from Popayan in New Granada, where a tribe speaking their dialect, the Mesayas, are alleged still to reside.‡

* Lozano, *Hist. de la Conquista de Paraguay*, pp. 415, 416.

† Lozano, *Ibid.*, pp. 422-425.

‡ Paul Marcoy, *Voyage à travers l'Amerique du Sud*, Tome II., p. 241; comp. Waitz, *Anthropologie der Naturvölker*, Bd. III., s. 427.

The peculiar "mitred" skulls of the Omaguas are an artificial deformity prized by them as a beauty.

The Tupi is rich in mythological tales which have been collected by several competent students of their tongue. (Hartt, Magalhaes, etc.) Their religion is a simple animistic nature-worship.

The dead were buried in large urns, usually in localities set aside for the purpose. One such on the island Maraho, near the mouth of the Amazon, has yielded a rich harvest to archæologists.

The general culture of the Tupis was superior to that of any other Brazilian tribes, but much inferior to that of the Incas. They were to a slight extent agricultural, raising maize, manioc, tobacco, which they smoked in pipes, and several vegetables. Some fowls, monkeys and peccaries were tamed and used as food. Their houses were of straw, lattice work and leaves, sometimes plastered with mud. The communal system prevailed, twenty or thirty families occupying one residence. A number of such houses would be erected on some favorable site and surrounded by a palisade of strong poles. These towns were, however, not permanent, and nearly half the year was spent in hunting and fishing expeditions along the streams. They went entirely naked, but wove excellent hammocks from the bark of trees and other vegetable fibres. Devoid of a knowledge of metals, they were in the height of the age of polished stone, many of their products in this direction being celebrated for symmetry and delicacy.* The art of

* The "Amazon-stones," *muira-kitan*, are ornaments of hard stone, as jade or quartz.

the potter was also well developed, and the vases from the Amazon, called *igasauas*, rank both in symmetry, decoration and fine workmanship among the most creditable specimens of American ceramics.

The language which characterizes this widely distributed stock is polysynthetic and incorporating, with the flexibility peculiar to this class of tongues. It has been the subject of a number of works, but still lacks a thorough comparative treatment. The Jesuit missionaries adopted the Guaraní dialect throughout their extensive "reductions," and translated into it a variety of works for the instruction of their acolytes, some of which have been printed.

TUPI LINGUISTIC STOCK.

Ababas, in Bolivia.

Amazonas, on lower Amazon.

Anambes, on Rio Tocantins.

Apiacas, near Rio Arinos and upper Tapajoz.

Araguagus, on lower Paru.

Bororos, near Rio Paraguay.

Camaguras, in province Matogrosso.

Cambevas, see *Omaguas*.

Cambocas, mouth of Rio Tocantin.

Caracatas, on upper Uruguay and Parana.

Cayovas, on Rio Tapajoz.

Chaneses, in Bolivia.

Chiriguanos, in Bolivia.

Chogurus, on Rio Pajehu.

Cocamas, near Rio Nauta (upper Amazon) and Rio Ucayali.

Cocamillas, near the Cocamas.

Cuchiuaras, on Rio Tocantins.

Guaranis, in Uruguay.

Guarayos, in Bolivia.

Guayanas, in Uruguay.

Gujajaras, on Rio Maranhas.

Jacundas, on Rio Tocantins.

Jamudas, in province Pará.

Maues, on the Amazon.

Mbeguas, on Rio Parana.

Manitsauas, on upper Schingu.

Mitandues, near Rio Tapajoz.

Mnndrucus, on Rio Tapajoz.

Muras, on Rio Madeira.

Omaguas, on lower Iça.

Oyampis, on upper Oyapok.

Pacajas, on lower Amazon.

Parentintims, in province Amazonas.

Paris, see *Mnndrucus*.

Piturunas, on Rio Curitiba.

Sirionos, on Rio Paray, Bolivia.

Tamoyos, near San Vincente, Brazil (extinct).

Tapaunas, on Rio Tocantins.

Tapirapes, in province Goyaz.

Tapes, on Rio Uruguay.

Turas, on lower Rio Madeira.

Uyapas, on Rio Arinos.

Yurunas, on Rio Schingu, from 4° to 8°.

2. *The Tapuyas..*

The *Tapuya* stock is at once the most ancient and the most extensive now living on the soil of Brazil. Its various tribes are found from s. lat. 5° to s. lat. 20°, and from the Atlantic to the Schingu river. The name *Tapuya* was applied to them by the Tupis, and means "enemies" or "strangers"—two ideas which are always synonymous in primitive life. They are also called *Crens* or *Guerens*, the Old Ones or Ancient People. This seems to have reference to their possession of the coast before the arrival of the Tupi hordes from the south.

By some writers they are believed to have been the earliest constructors of the *sambauis*, the shell-heaps

or kitchen-middens, which are of great size and numerous, along the Atlantic and its bays. These are supposed to indicate an antiquity of 2,000 years;* but the Tapuyas can lay claim to a title to their land far older than that. The skulls and human bones which were discovered by Dr. Lund in the caves of Lagoa Santa in immediate juxtaposition to those of animals now extinct, came from a region occupied by the Tapuyas, and are in all respects parallel to those of the tribe to-day. This would assign them a residence on the spot far back in the present geologic period.

Their appearance is that of an antique race of men. They are of middle height, with long upper and short lower extremities. The face is broad, the eyes small and under prominent ridges, the forehead low and retreating; the sutures are simple, the face prognathic, and the skull decidedly dolichocephalic (73), but of good capacity (1470 cub. cent.), and leptorhinc; the mouth is large and the nose prominent. In color they present a variety of shades of reddish brown, and their hair, which is coarse, verges rather on the dark brown than the black.† They are not ugly, and the expression of the face, especially in the young, is often attractive. Those of them, however, who distend the lower lip with the large labret or *botoque* (from which the *Botocudos* derive their name), cannot be other than hideous to European eyes.

*H. Müller, in *Compte Rendu du Congrès Internat. des Americanistes*, 1888, p. 461.

†Dr. P. M. Rey, *Etude Anthropologique sur les Botocudos*, p. 51 and passim. (Paris, 1880.) Dr. Paul Ehrenreich, "Ueber die Botocudos," in *Zeitschrift für Ethnologie*, 1887, Heft I.

In culture the Tapuyas are reported to stand on the lowest scale. When free in their native woods they go absolutely naked; they have no other houses than temporary shelters of leaves and branches; they manufacture no pottery, build no canoes, and do not know how to swim. When first in contact with the whites they had no dogs, knew nothing of the use of tobacco or salt, and were common cannibals. They have no tribal organizations and no definite religious rites.

To counterbalance all these negatives, I hasten to add that they are hunters of singular skill, using strong bows with long arrows, manufacture polished stone axes and weave baskets of reeds, and, what is rare among the Indians, use tapers made from wild bees-wax and bark fibre.* Their marriages are monogamous, though rarely permanent, and they are not devoid of family affection.† Though lacking definite religious ideas, they are careful to bury the dead, and have a belief that the spirit of the departed survives and wanders about at night, for which reason they are loth to move in the dark. The soul of a chief may take the form of a jaguar. During a thunder storm they shake a burning brand and shoot arrows toward the sky, to appease by imitation the powers of the storm; and they are much given to semi-religious

* Von Tschudi, *Reise in Sud Amerika*, Bd. II., p. 281. If this is one of their ancient arts, it is the only instance of the invention of an artificial light south of the Eskimos in America.

† Dr. P. M. Rey states that the custom of kissing is known to them both as a sign of peace between men, and of affection from mothers to children. (*Et de Anthropologique sur les Botocudos*, p. 74, Paris, 1880.) This is unusual, and indeed I know no other native tribe who employed this sign of friendship.

dances, in which their motions are to the sound of a native flute, which is played with the nose.*

Their language is difficult in its phonetics, and presents a contrast to most American tongues by its tendency toward the isolating form, with slight agglutination. A carefully prepared vocabulary of it has recently been published by Dr. Paul Ehrenreich,† whose studies on this stock have been peculiarly valuable.

TAPUYA LINGUISTIC STOCK.

Apina-gês, north of Rio Tocantins.

Aponegi-crens, in south of province Maranhao.

Acroas, near Rio Tocantins.

Aimores, see *Botocudos*.

Botocudos, in Sierra dos Aimures.

Carahos, on Rio Tocantins.

Camacans, near Rio Pardo.

Cayapos, north of Rio Pardo.

Chavantes, near Rio Maranhao.

Cherentes, near Rio Tocantins.

Chicriabas, near Rio de San Francisco.

Coretus, on Rio Yupura.

Cotoxos, near Rio Doce.

Cumanachos, in province Goyaz.

Crens, see *Botocudos*.

Gês, in province Goyaz.

Goyotacas, in province Goyaz (see below).

Malalalis, near Rio Doce.

Malalis, in province Goyaz.

Masacaras, in province Goyaz.

Pancas, on Rio das Pancas.

Potês (Poton), on upper Mucuri.

Puris, near Rio Paraiba.

Suyas, on upper Schingu.

* Dr. Rey, *loc. cit.*, p. 78, 79.

† In the *Zeitschrift für Ethnologie*, 1887, s. 49.

The Goyotacas in the province of Goyaz and the regions adjacent include a large number of tribes which Von Martius has shown to have sufficient linguistic affinity among themselves to unite in one group, and connections enough with the Tapuya stem to be regarded as one of its sub-stocks.*

GOYOTACA SUB-STOCK.

Capochos, in the sierra between Minas Geraes and Porto Seguro.

Coropos, on the Rio da Pomba.

Cumanachos, adjacent to the Capochos.

Machacalis, on and near Rio Mucury.

Macunis, between Minas Geraes and Porto Seguro.

Monoxos, adjacent to the Macuris.

Panhames, on head-waters of Rio Mucury.

Patachos, on head-waters of Rio de Porto Seguro.

Another group believed by Martius to be a mixed off-shoot of the Tapuya family belong to what I may call the

TUCANO SUB-STOCK.

Cobeus, on Rio Uaupes.

Dace, on Rio Uaupes.

Jupua, on upper Yupura.

Jauna, on Rio Uaupes.

Tucano, on Rio Uaupes.

All these tribes are found in the vicinity of the river Uaupes, and are distinguished by three vertical lines tattooed or incised on the cheeks. They take their name, as do some other Brazilian tribes not related to them, from the beautiful toucan bird, which

*A comparative vocabulary of these dialects is given by Von Martius, *Ethnographie und Sprachenkunde Amerikas*, Bd. I., s. 310.

is frequently held sacred among them, and is sometimes chosen as the totem of a gens.

I also attach to this stock the Carnijos or Fornio, a vocabulary of whose language has been published by Professor John C. Branner, and which hitherto has not been identified.* The following comparison between it and the Tapuya dialects will show the affinity:

	CARNIJOS.	TAPUYA.
Fire,	<i>töch,</i>	<i>tiaköh.</i>
Eye,	<i>i-to,</i>	<i>ainthó, kitho.</i>
Nose,	<i>d-ereta,</i>	<i>d'asigri.</i>
Tooth,	<i>i-axi,</i>	<i>aiqué, daguoi.</i>

3. *The Arawaks.*

The Arawak stock of languages is the most widely disseminated of any in South America. It begins at the south with the Guanas, on the head-waters of the river Paraguay, and with the Baures and Moxos on the highlands of southern Bolivia, and thence extends almost in continuity to the Goajiros peninsula, the most northern land of the continent. Nor did it cease there. All the Antilles, both Greater and Less, were originally occupied by its members, and so were the Bahama Islands,† thus extending its dialects to within a short distance of the mainland of the northern con-

* In the *Transactions of the American Association for the Advancement of Science*, 1886, p. 329. The terms for comparison are borrowed from Von den Steinen's *Comparative Vocabulary of the Tapuya Dialects*.

‡ See D. G. Brinton, "The Arawack Language of Guiana in its Linguistic and Ethnological Relations," in *Trans. of the Amer. Phil. Soc.*, 1871.

continent, and over forty-five degrees of latitude. Its tribes probably at one time occupied the most of the lowlands of Venezuela, whence they were driven not long before the discovery by the Caribs, as they also were from many of the southern islands of the West Indian archipelago. The latter event was then of such recent occurrence that the women of the Island Caribs, most of whom had been captured from the Arawaks, still spoke that tongue.

They were thus the first of the natives of the New World to receive the visitors from European climes, and the words picked up by Columbus and his successors on the Bahamas, Cuba and Hayti, are readily explained by the modern dialects of this stock. No other nation was found on any part of the archipelago except the two I have mentioned. The whole of the coast between the mouths of the Orinoco and Amazon appears to have been in their possession at or a short time before the epoch of the discovery.

The Antis or Campas, who perhaps occupy the original home of the stock, own as the centre of their domain the table-land known as El Gran Pajonal, or the Great Grass Field, bounded by the rivers Ucayali, Pachitea and Perene. Their hue is a bistre and their habits wild; some slight tillage is carried on, and the women spin and weave the wild cotton into coarse garments. The taming of animals is one of their arts, and around their huts are seen monkeys, parrots, peccaries and tapirs.* It is noteworthy that some of them are skilful blacksmiths, smelting the metal

* Olivier Ordinaire, "Les Sauvages du Perou," in *Revue d' Ethnographie*, 1887, p. 282.

from the native ores, and working it into axes, knives, spear points, etc., of excellent quality.*

The names Campas and Antis were used as generic terms, the latter applied to the tribes on the slopes of the Cordilleras and the former to those on the plains. A large number of sub-tribes are named by the older writers, the principal of which were the Choseosos, Machigangas, Pilcosumis and Sapaunabos. The Machigangas lived on the Pilcopata and Vilcanota, and their language has been erroneously stated by Von Tschudi to be an independent stock.† The Chunchas and Cholones are by some classed with the Campas, and they are said to have been the possessors of the famous Cerro de Sal, or Salt Mountain, to which the neighboring tribes repaired in great numbers to obtain supplies of this useful article.

The Guanas are a nation who have long lived on the upper Paraguay, in the province Mato Grosso on the river Mambaya, and vicinity. D'Orbigny believed that they were a member of the Mataco group,‡ but they are now recognized as belonging to the Arawak stock. They are noteworthy for their peaceful disposition and unusual intelligence. Hervas speaks of them as the most able nation visited by the missionaries in the whole of America.§ The traveler

* C. Greiffenstein, in *Zeitschrift für Ethnologie*, 1878, s. 137.

† Von Tschudi, *Organismus der Kechua Sprache*, p. 67. For other members of the Campas see Hervas, *Catalogo de las Lenguas Conocidas*, Tom I., p. 262; Amich, *Compendio Historico de la Serapica Religion*, p. 35, and *Scottish Geog. Journal*, Feb., 1890.

‡ D'Orbigny, *L'Homme Americain*, Tom. II., p. 104, note.

§ "Los Guanas son la mejor nacion de las barbaras hasta ahora descubiertas en America." Hervas, *Catalogo de las Lenguas Conocidas*, Tom. I., p. 189.

Castelnau confirmed this good opinion. He found them living in neat houses and cultivating the land with skill and industry. They raised not only the ordinary food plants, but cotton and sugar cane, pressing the sap from the latter by machinery of their own devising, and moulding the sugar into loaves. Their cotton cloth, dyed of various colors, was highly esteemed for its texture.

Castelnau describes them as occupying four settlements near Albuquerque and Miranda, and comprising the Chualas or Guanas proper, the Terenos, the Laianas, and the Quiniquinaos.* Later investigations have shown that of these the Terenos and Quiniquinaos are members of the Guaycuru stock of the Chaco, and that the Chualas and Laianas alone belong to the true Guanas.†

The *Paiconecas* or Paunacas were attached to the mission of the Conception in Bolivia, in 16° south latitude. They numbered about 500 in 1831. In customs and appearance they approached the Chiquitos. Their former home was between the sources of the Rio Blanco and Rio Verde.

The *Saravecas*, three or four hundred in number in 1831, were attached to the mission of Santa Anna, in Bolivia, and were its handsomest members. Their former homes were in the eastern hills of the Cordillera, about 16° south latitude.

Although these are classed as irreducible stocks by D'Orbigny and others who have followed him,

* *Expedition dans l'Amérique du Sud*, Tome II., p. 480.

† *Compte-Rendu du Cong. Internat. des Américanistes*, 1888, p. 510.

they are both clearly branches of the Arawak stem, as will be seen by a brief comparison.*

	PAICONECA.	SARAVECA.	ARAWAK STOCK.
Sun,	<i>isese,</i>	<i>caame,</i>	<i>sese, camu.</i>
Moon,	<i>kejere,</i>	<i>cache,</i>	<i>kejeres, kashi.</i>
Fire,	<i>chaki,</i>	<i>tikai,</i>	<i>yaki, ikii.</i>
Water,	<i>ina,</i>	<i>une,</i>	<i>ine, une.</i>
Eye,	<i>ihuikis,</i>	<i>nol,</i>	<i>nohlo, ikise.</i>

Others could readily be added, but the above are sufficient.

Another important tribe of this stock in this region were the Piros, otherwise called Chuntaquiros and Simirencis, whose home was about the junction of the Ucayali and Apurimac, and thence along both these rivers. The vocabularies of their tongue obtained by Castelnau and Paul Marcoy leave no doubt of their affiliations. They were largely converted by the Jesuits between 1683 and 1727.

The Wapisianas, or Wapianas in British Guiana, with their sub-tribe the Atorai (Tauri or Dauri), are stated by Im Thurn to speak a tongue wholly different from the Arawak; but an analysis of its expression and an extended comparison place it beyond doubt in this stock.†

The Tarumas and Maopityans, who now live in

* The words from the Paiconeca and Saraveca are from D'Orbigny, *L'Homme Americain*, Tome I., p. 165; those from the Arawak stock from the table in Von den Steinen, *Durch Central-Brasilien*, s. 294.

† Im Thurn, *Among the Indians of Guiana*, p. 165. Comp. Von den Steinen, *Durch Central Brasilien*, ss. 295, 307.

southern British Guiana, but are said to have originally come from the Rio Negro, speak related dialects.

They enjoy a rather high degree of culture, being celebrated for the manufacture of cassava graters, for the hunting dogs which they breed and train, and for the fine pottery they manufacture. Both Schomburgk and Im Thurn regard them as an independent stock; but from a comparison of the fifteen nouns given by the former in their language,* I infer that they are an Arawak tribe, speaking a dialect mixed with some Carib and Tupi words, and with frequent vowel elision.

TARUMA.

Sun,	<i>ouang,</i>	(<i>auvan-ialū</i> , Paravilhana).
Moon,	<i>piwa,</i>	(<i>pia</i> , Baniva, <i>piua</i> , Ouayéoué).
Fire,	<i>hua,</i>	(<i>hua-to</i> , Carib).
Water,	<i>tza,</i>	(<i>tuná</i> , Carib).
Head, my,	<i>a-tta,</i>	(<i>no-totia</i> , Baré).
Eye, my,	<i>a-tzi,</i>	(<i>a-kussi</i> , Arawak).
Mouth,	<i>me-ruku-kanna,</i>	(<i>ülle-rukuhu</i> , Arawak).
Nose,	<i>assa,</i>	(<i>issi-rihi</i> , Arawak).
Hand,	<i>ahu,</i>	• (<i>kx-ava</i> , Bakairi).
Foot,	<i>appa,</i>	(<i>upu</i> , Galibi).
Bow,	<i>tzeika,</i>	(<i>takou</i> , Carib).
Star,	<i>uingra,</i>	(<i>uinari</i> , Baré).

This comparison leaves little doubt but that this mixed dialect is chiefly of Arawak lineage.

The Arawaks wandered as far east as the upper Schingu river, where Von den Steinen found the Kustenau, a distant member of the stem, with various

* Sir Robert H. Schomburgk, in *Report of the Brit. Assoc. for the Adv. of Science*, 1848, pp. 96-98. See also Im Thurn, u. s., pp. 163, 272; Martius, *Ethnographie*, Bd. I., s. 683.

minor tribes, as the Vauras, Mehinacus, etc. Along the river Ventuari the populous tribe of the Maipures have taken a conspicuous place in the annals of the missions. Indeed, the whole stock is sometimes called by their name*; but it is well to retain the better known *Arawak*, which is the appellation of that portion of the tribe in Guiana between the Corentin and Pomeroon rivers. It means "meal-eaters," and was first applied to them in derision on account of their large consumption of cassava bread.

There is a prevailing similarity in their physical type. The adults are slightly undersized, rarely reaching above five feet six inches, with low foreheads and straight narrow noses. The form of the skull is short and the jaws are not protruding—orthognathic and brachycephalic.† The physical force averages less than that of the European, and there is decidedly less power of resisting disease.‡ The Jesuit Eder mentions a peculiarity among the Peruvian Arawaks, (Moxos, Baures). It is that the end of the little finger does not reach to the last joint of the third finger. The absence of this peculiarity he states will reveal a mixture of Spanish blood to the third generation.§

*Lucien Adam, *Compte-Rendu du Congrès Internat. d'Américanistes*, 1888, p. 492.

† "All the numerous branches of this stem," says Virchow, "present the same type of skull." *Zeitschrift für Ethnologie*, 1886, s. 695.

‡ Everard F. im Thurn, *Among the Indians of Guiana*, p. 189. (London, 1883.)

§ F. X. Eder, *Descriptio Provinciæ Moxitarum*, p. 217. (Budæ, 1791.) Dr. Washington Matthews has kindly made for me a number of observations upon Navajo Indians with reference to this anatomical peculiarity. It is not markedly present among them.

It would be interesting to learn how widely this is noticeable.

The culture of the Arawak stock was generally somewhat above the stage of savagery. On the West Indian islands Columbus found them cultivating maize, potatoes, manioc, yams and cotton. They were the first to introduce to Europeans the wondrous art of tobacco smoking. They wove cotton into garments, and were skilful in polishing stone. They hammered the native gold into ornaments, carved curious masks of wood, blocked rude idols out of large stones, and hollowed the trunks of trees to construct what they called *canoes*.

Such is approximately the culture of the existing tribes of the stock. The Arawaks of Guiana also raise cassava and maize, though they depend largely on hunting and fishing. Like the northern tribes, they have well-developed gentile or totemic systems, with descent in the female line.* Marriages are by purchase, and the strange custom of the *couvade* obtains; that is, at the period of parturition the husband takes to his hammock, and is waited on as if he was the sick one. Their houses are usually single, not communal, and are furnished with swinging hammocks, mats, basket-work and pottery.

The Haytian mythology was quite extensive, and the legends of the Arawaks of Guiana have been collected, and are also rich. In all the tribes the dead were generally buried, and often the house of the deceased was destroyed or the spot deserted.

* For particulars see Im Thurn, *ubi supra*, Chap. VII.

ARAWAK LINGUISTIC STOCK.

- Amarapas*, in British Guiana.
Antis or *Campas*, on Rio Apurimac.
Araicus, on Rio Jatahy.
Arawaks, on coast of Guiana.
Atorais, on the upper Essequibo.
Banivas, on Rio Atahuapo and Rio Içauna.
Barès, on Rio Negro.
Baures, on Rio de los Baures.
Campas, see *Antis*.
Canamirim, on Rio Jurua.
Cariayos, on Rio Negro.
Cauixanas, on Rio Jupura.
Chontaquiros, see *Piros*.
Goajiros, on Goajiro peninsula.
Guanas, on Rio Paraguay.
Guinaus, on upper Orinoco.
Haitians, on island of Hayti.
Jabaanas, on Rio Marauia.
Jucunas, on Rio Jupura.
Jumanas, near Rio Jupura.
Juris, on Rio Solimoes.
Kustenaus, on Rio Schingu.
Manaos, near Rio Negro.
Manatenerys, on Rio Purus.
Manivas, see *Banivas*.
Maipures, on Rios Ventuari and Orinoco.
Maranhos, on Rio Jatahy..
Mariates, on Rio Iza.
Mawakwas, on upper Orinoco.
Moxos, on head-waters of Rio Mamore.
Paiconecas, on Rio Blanco.
Parenì, on Rio Orinoco.
Parisis, in province Mato Grosso.
Passés, on lower Jupura.
Piapocos, on Rio Guaviare.
Piros, on Rio Ucayali.
Saravecas, near Santa Ana, Bolivia.
Simirencis, see *Piros*.
Tainos, see *Haitians*.

Tarianas, on Rio Negro.

Tarumas, in British and Dutch Guiana.

Uainambeus, on Rio Jupura.

Uainumas, on Rio Jupura.

Uirinas, on Rio Marari.

Wapisianas, in Guiana.

West Indians, on Bahamas and Antilles.

Yuris, see *Juris*.

The Barés are now found along the banks of the Casaquiare and the Guainia, the Felipe, the Atabapo and some portions of the Rio Negro. They belong to the Arawak stock, their dialect being related to those of the Banivas and Maipures. About the middle of this century the traveller Richard Spruce found them in the regions assigned by Gilií to other tribes, indicating a displacement of the population. He collected a number of vocabularies, offering sufficient evidence in his opinion to establish the relationship of the following bands:*

BARÉ FAMILY OF THE ARAWAK STOCK.

Barés or *Barrés*, on Rio Negro, etc.

Cunipusanas, on Rio Casaquiare.

Guariquenas, on Rio Casaquiare.

Jabaanas, on Rio Pacimoni.

Mandauacas, on Rio Casaquiare and Siapa.

Masacas, on Rio Masaca and Siapa.

Pacimonarias, on Rio Casaquiare.

Tarianas, on Rio Yupura.

To these I would add the Uirinas of the Rio Marari, on the strength of a vocabulary collected by Natterer.

*Von Martius, *Ethnographie und Sprachenkunde Amerikas*, Bd. I., s. 625-626.

4. *The Caribs.*

The Carib stock is one of the most extensively distributed in the southern continent. At the discovery its dialects were found on the Lesser Antilles, the Caribby Islands, and on the mainland from the mouth of the Essequibo River to the Gulf of Maracaibo. West of the latter it did not reach the coast, nor has any positive traces of its introduction above the straits of Panama earlier than the conquest been found, in spite of frequent assertions to the contrary. Inland from the Arawaks on the shore of Guiana are a number of Carib tribes, as the Macusi and Wapiana, so numerous that this region has been thought by some to have been the original home of the stock; but the discovery by Dr. Karl von den Steinen of a tribe, the Bakairi, on the head-waters of the Schingu River, speaking a very pure form of the language,* and the recognition of the Carib affinities of the Palmellas on the Rio dos Baures, throw another light on the trend of Carib migrations, strongly supported by a series of other considerations. Thus, it has been satisfactorily shown by Im Thurn that the Caribs in Guiana wandered thither from the Orinoco district, some inland and some along the coast, and probably from the large islands adjacent to the coasts.†

These islands in turn were peopled from the mainland to the east, as I have already shown, their earlier population having been Arawak. All the Island, Orinoco and Guiana Caribs can thus be traced back

* Karl von den Steinen, *Durch Central-Brasilien*, Cap. XXI., "Die Heimat der Kariben."

† Im Thurn, *Among the Indians of Guiana*, p. 171-3.

to the mainland of northern Venezuela. In this vicinity was spoken the Cumanagoto dialect, in the province of Cumana or New Andalusia. According to the early missionaries, it was current along the coast for more than a hundred leagues, extending into the province of Caracas and beyond. The tribes who spoke it were the Chaymas, the Cores, the Cumanas, the Quacas, the Parias, the Palenques, the Varri-gones, and others.* Other dialects to the west are the Oponé and Cararé, specimens of which were obtained by Lengerke in the vicinity of Bucaramanga, province of Santander.†

The sierra which divides the head-waters of the Caura from those of the Rio Branco and other streams flowing into the Rio Negro and Amazon, are peopled on both slopes by wandering tribes of the Carib stock. Near the sources of the Caura, Chaffanjon found the once formidable Guaharibos, now naked and wretched fugitives, fearing the white far more than they are feared by him.‡ On the southern slope, along the Rio Jauapery and neighboring streams, are bands of Crichanas, Ipurucotos (Purigotos), Macuchis, and Jauamerys (Waimiris), all speaking nearly related dialects of the Carib tongue. Dr. Barboza Rodrigues has given a touching picture of their recent struggles with the whites of the adjacent settlements, and the miserable condition to which they are reduced. We

* See Francisco de Tauste, *Arte, Bocabulario, y Catecismo de la Lengua de Cumana*, p. 1 (Ed. Julius Platzmann).

† They are printed in the Berlin *Zeitschrift für Ethnologie*, 1878.

‡ J. Chaffanjon, *L'Orenoque et le Caura*, p. 308 (Paris, 1889).

owe to the same sympathetic naturalist an interesting description of their customs and language.*

The hill tribes of French Guiana are known as Roucouyennes, from the *roucou*, a vegetable coloring matter with which they paint their skins. They exhale a peculiar odor like that of new leather, probably from the action of the tannin in the *roucou* on the skin. Naturally they are light in color, and at birth almost white.†. Marriages of father and daughter, or brother and sister, are not rare among them.‡

A connecting link between these Caribs of Guiana and the Bakairis of the south is supplied by the Apiacas of the Rio Tocantins, who speak a pure dialect of the stock, midway in character between those of the two extremes named.§

The Arubas, who occupied the island of that name off the coast of Venezuela, and whose mixed descendants now speak the Papamiento jargon, are no doubt correctly assigned to this stock by M. Pinart. They were skillful potters, and buried their dead in large

* Joao Barboza Rodrigues, *Pacificação dos Crichanas*, (Rio de Janeiro, 1885). Dr. Rodrigues was Director of the Botanical Museum of the Amazons. His work contains careful vocabularies of over 700 words in the Macuchi, Ipurucoto and Crichana dialects. His journeys to the Rio Jauapery were undertaken chiefly from philanthropic motives, which unfortunately did not bear the fruit they merited.

† "D'un blanc presque pur." Dr. J. Crevaux, *Voyages dans l'Amérique du Sud.*, p. III (Paris, 1883).

‡ Dr. Crevaux, *Ibid.*, p. 304.

§ See Dr. Paul Ehrenreich, in the *Verhandlungen der Berliner Anthropol. Gesell.*, 1888, p. 549. These are not to be confounded with the Apiacas of the Rio Arinos, who are of Tupi stock. The word *apiaca* or *apiaba* in Tupi means simply "men."

urns. The numerous polychromatic petroglyphs they have left and their peculiar character are especially noteworthy.*

Sir Robert H. Schomburgk classifies the Carib stock in Guiana as follows, giving a short specimen of each dialect, which differ, he says, among themselves about as much as French and Italian.†

CARIB SUB-STOCK IN GUIANA.

Accawai.

Arecuna.

Caribisi.

Guianau.

Macusi.

Maionkong.

Mawakwa.

Pianochotto.

Soerigong,

Tiverighotto.

Waiyamara.

Woyawoi.

The Guaques, who live on the head-waters of the Caqueta or Yapura river, have not been heretofore identified as Caribs; but their dialect, as collected by Presbyter Mannel P. Albis in 1853, leaves no doubt as to its relationship. He describes them as intelligent and kindly, but incorrigible and dexterous thieves, skillful in the collection of wax and the preparation of poisons. Nowhere is the couvade with its associate superstitions more rigidly observed. No woman must be seen by men during her catamenia, and at childbirth she must separate from the household for three months. During all that time her husband strictly observes a diet and seclusion.‡

* A. S. Pinart, *Aperçu sur d'île d'Aruba, ses Habitants, ses Antiquités, ses Petroglyphes* (folio, Paris, 1890).

† Report of the *Brit. Assoc. for the Adv. of Science*, 1848, p. 96.

‡ *Bulletin of the Amer. Ethnolog. Society*, Vol. I., p. 59.

The lower Orinoco basin was for a long time the center of distribution of the stock; they probably had driven from it nations of Arawak lineage, some of whom, as the Goajiros, they pushed to the west, where they were in contact with the Carib Motilones,* and others to the islands and the shores to the east. The Carijonas and Guaques on the head-waters of the Yapura or Caqueta are now their most western hordes, and the Pimenteras on the Rio Paruahyba are their most eastern. We can thus trace their scattered bands over thirty-five degrees of latitude and thirty of longitude. The earliest center of distribution which best satisfies all the conditions of the problem would be located in the Bolivian highlands, not remote from that I have assigned to the Arawaks.

The physical features of the Caribs assimilate closely to those of the Arawaks. They are taller in the average and more vigorous, but their skulls are equally brachycephalic and orthognathic. They are beardless, and have the same variability in color of skin. As good specimens of the modern Caribs we may take the tribes of Venezuela. These are spoken of as "the strongest, handsomest and most intelligent of any of the natives in northern South America."† They are tall, straight and symmetrical, the women not less muscular than the men. The hair is sometimes slightly wavy, as Von den Steinen saw among the Bakairi.

* The identification of the Motilones as Caribs we owe to Dr. Ernst, *Zeitschrift für Ethnologie*, 1887, s. 296.

† "La mas bella, la mas robusta y la mas inteligente," etc. F. Michelena y Rojas, *Exploracion Oficial de la America del Sur*, p. 54 (Brusselas, 1867).

The Caribs have had a bad reputation as to culture on account of their anthropophagous tendencies. Indeed, the word *cannibal* is a mispronunciation of their proper name, *Karina*. But they were quite on a par with their neighbors, the Arawaks, and in some respects superior to them. For instance, their canoes were larger and finer, and they had invented the device of the sail, which seems to have been unknown to all the other tribes on the continent. To some extent they were agricultural, and their pottery was of superior quality.

The beginnings of picture-writing were in use among them, and the remarkable rock inscriptions still visible on the Orinoco and the Essiquibo are attributable to them, and were probably intended as conjurations to the supernatural powers, similar to others which remain in St. Vincent and other islands from the date of the Carib occupation.* Their family life was not usually communal, but each household occupied its own dwelling. In some parts, as in the deltas of the Essiquibo and Orinoco, and even on the dry savannas, their huts were built on a substructure of piles which lifted them five or six feet from the ground or the water, as the case might be.

The religious rites they observed were often elaborate. Their principal divinities are said to have been the sun, moon and earth, the latter of which was spoken of as the mother of the race. They practiced the *couvade*, and their priests, called *piaye*, exercised unlimited power, and were correspondingly feared.

* See D. G. Brinton, "On a Petroglyph from the Island of St. Vincent," in *Proceedings of the Acad. of Nat. Sciences of Philadelphia*, 1889, p. 417.

It was the opinion of Von Martius that the Carib, the Tupi-Guarani and the Arawak stocks are traceable to some very ancient common tongue. This view is at first sight strengthened by a wide comparison of vocabularies, but is weakened by an examination of the grammars of the three families, especially their pronominal elements. It is probable that the three ancestral tribes had early and close communication, but not original identity.

The seeming relationship has been rendered more prominent in certain instances by free later borrowings. M. Adam has shown that some of the northern dialects are in the condition of jargons, their grammar on the Carib model, their words drawn from various stocks. Such are the "Island Carib," which is largely Arawak, and the Boni-Ouyana, described by Dr. Crevaux.*

CARIB LINGUISTIC STOCK.

Akavaïs or *Accowaios*, in southern British Guiana.

Apalais, on the lower Paru.

Apiacas, on the lower Tocantins.

Arecunas, on Rio Branco.

Aricoris, see *Yaos*.

Bakairis, on the Upper Schingu.

Caribisis, in Guiana.

Carijonas, head-waters of the Caqueta.

Cariniacos, on lower Orinoco.

Chaimas, in ancient province of Cumana.

Cumanagotos, in ancient province of Cumana.

Galibis, in French Guiana.

Guaques, on the upper Caqueta.

* Also the Ouayéoué, of which a short vocabulary is given by M. Coudreau in the *Archives de la Société Américaine de France*, 1886.

Guaharibos, on the upper Caura.

Guayqueris, in province of Cumana.

Jauamerys, on Rio Jauapery.

Macusis, on Rio Negro.

Maqueritaris, on Rio Branco.

Motilones, near R. Zulia in Venezuela.

Palmellas, on Rio Paruahyba.

Paramonas, sub-tribe of Akavais.

Pianagotos, on Rio Branco.

Paravilhanas, on Rio Branco.

Pimenteiras, on Rio Paruahyba.

Purigotos, on Rio Jauapery.

Rocouyennes, in French Guiana.

Tamanacas, on Rio Cuccivero.

Tiverigotos, on Rio Branco.

Trios, on upper Corentyn.

Vaiyamaras, on Rio Branco.

Voyavais, on Rio Branco.

Yaos, in Guiana.

Zurumutas, sub-tribe of *Macusis*.

(The Orinoco sub-stock will be described later.)

5. *The Cariris.*

In his enumeration of the tribes of Central Brazil, Von Martius brings together a large number who once dwelt in the provinces of Bahia and Pernambuco, under the general title, "the Guck or Coco stem," so called from the word which in many of them means "the paternal uncle." * This division has not been endorsed by later research, and it is evident that Von Martius included several quite different stocks under this appellation.

Among these, the most prominent were the *Cariris* or *Kiriri*. They are now reduced to about 600 souls,

* Martius, *Ethnographie*, Bd. I., s. 346, sq. The word may mean either maternal or paternal uncle, V. d. Steinen, s. 292.

but at one time were a powerful nation, and in 1699 the Jesuit Mamiani published a grammar and other works in their tongue.* They were among the more cultivated of the Brazilian tribes, given to agriculture, skilled in dyeing and weaving cotton, employing a primitive spindle and loom, with weapons of several kinds and of superior finish.

The Sabuyas, who dwell near them, speak a closely related dialect; but further affinities have not been verified. They have, indeed, many loan words from the Tupi, and some from the Carib stock, but the ground-work of these tongues is different. Von den Steinen offers some reasons for believing that they moved down the Amazon from a far western residence.†

6. *The Coroados, Carajas and others.*

The Coroados derive their name from the Portuguese word *coroa*, a crown, the term "crowned" being applied to several native tribes who wore their hair in a peculiar manner. It is not at all an ethnic designation, and I use it to bring into relief the need of some term of greater precision. Thus, there are the Coroados who are neighbors and linguistically related to the Puris, dwelling on the Parahyba river. By some they have been included among the Tapuyas

* Luiz Vincencio Mamiani, *Arte de la Lingua Kiriri*, and his *Catechismo na Lingua da nação Kiriri*. The former has been republished (1877), and also translated into German by Von der Gabelentz (1852).

† *Durch Central-Brasilien*, s. 303. This writer looks upon the Cariris as a remote offshoot from the Carib stock.

as alleged relatives of the Botocudos. But not only is there no relationship of language, but physically they are widely apart. The Puris-Coroados are a dark yellow brown, with mesocephalic heads, dark brown oblique eyes, large mouths and thick lips—nowise the type of the Botocudo. They are moreover agricultural in habits, and farther advanced in the arts.*

There are other Coroados in the extreme south of Brazil, in the province Rio Grande do Sul, whither they are said to have wandered from the north. These do not appear to be Botocudos either. They have round heads, dark brown eyes, low foreheads, and are of a light coffee color. They are noticeable for their clean and ornamental huts, and for their skill in hunting, in which they employ arrows five feet in length, with bone points. They pray to certain stars as protective divinities, and like some northern tribes, clean and preserve the bones of the dead.†

The *Carajas* belong to a stock who dwell on the affluents of the river Araguay, in the province of Goyas in southern Brazil. The traveller Castelnau‡ penetrated to them, and was our earliest source of information about them. They are wild and warlike, with a bad reputation among their neighbors. He

* See Von den Steinen, *Durch Central-Brasilien*, s. 320; Paul Ehrenreich, *Zeitschrift für Ethnologie*, 1886, s. 184.

† Reinhold Hensel, "Die Coroados der Provinz Rio Grande do Sul," in *Zeitschrift für Ethnologie*, Bd. II., s. 195.

‡ F. de Castelnau, *Expedition dans l'Amérique du Sud*, Tom. I., p. 446.

was told they had no religion and no rites, but also that they were strictly monogamous and singularly firm moralists, punishing libertinage with the death of both parties; statements which do not accord. Their method of burial was curious. The corpse was interred in an upright position, the head out of the ground. An ample stock of bananas and other food was placed near it, and renewed from time to time. This clearly indicates a belief in life after death. The pure Carajas are markedly dolichocephalic.

The Caraja language is known too imperfectly to permit a proper study of its relationship. It is complex and difficult, and spoken differently by the men and the women. From the scant material at hand I perceive lexical relationship in some important words to the Tapuya stock,* but a wide divergence in phonetics and apparently in construction. Its members are as follows:

* For instance :

	CARAJA.	BOTOCUDO.
Woman,	<i>awken,</i>	<i>joku-nang.</i>
Sun,	<i>tiou,</i>	<i>taru.</i>
Head,	<i>w-oara,</i>	<i>curu.</i>
Tooth,	<i>wa-djon,</i>	<i>yune.</i>
Hand,	<i>wa-depo,</i>	<i>nipo.</i>
Fire,	<i>eaotou,</i>	<i>poté.</i>

Dr. Paul Ehrenreich, who has a mass of unpublished material about the Caraja language, says it is wholly unconnected with the Carib group. *Verhandlungen der Berliner Anthropol. Gesell.*, 1888, p. 548.

CARAJA LINGUISTIC STOCK.

Carajahis, about Salinas.

Carajas, on the Rio Araguay.

Chimbioas, on eastern affluents of lower Araguay.

Javahais, on upper Araguay and island of Bananal.

Ximbioas, see *Chimbioas*.

A certain number of vocabularies have been obtained by travellers in Brazil from mixed-blood tribes, who spoke dialects sometimes compounded of several native tongues, sometimes of these mingled with Portuguese or negro elements. Such is the dialect of the *Meniens*, who lived in eastern Brazil near the Villa Belmonte, whose speech was a jargon of the Tapuya and negro languages; and that of the *Cames* in the interior of San Paulo, who also made use of a barbarous dialect, compounded of the African idioms of runaway slaves, and that of the Botocudos. The Catoquina, a specimen of which was obtained by Spix from a band on the affluent of the Jurua, and the Catoxa or Cotoxo of the Rio Parada, are other examples.*

7. *The Orinoco Basin; Carib Sub-Stock; Salivas; Arawak Sub-Stock; Otomacas; Guamas; Guayoas; Garuoas; Guaraunos; Betoyas; Piaroas, etc.*

The Llanos of Venezuela coincide with the former "Territory of Caqueta," and embrace a region about forty thousand square miles in extent, covered either with grass and rushes or with dense forests. In the

* Vocabularies of these are collected by Von Martius in his *Ethnographie und Sprachenkunde Amerikas*, Bd. II., ss. 155, 156, 161, 212, etc.

wet season it is a vast marsh, in the dry it is scorched by a burning sun, raising the thermometer daily to over 100° in the shade. Yet the Llanos are but a part of the vast upper water-shed of the northern affluents of the Amazon and those of the Orinoco, which together drain a country larger than the whole of France.

This wide expanse is thinly populated with bands of savages, gaining their subsistence chiefly from the rivers, few of them brought within the range of civilized influences. Linguistically the majority belong to the Arawak and the Carib stocks; but there are numbers of tribes whose affinities are uncertain, or who are apparently of quite other lineage. Scores of names are found in the records of the missions and on the pages of travelers, of peoples who have disappeared or are now known by other designations. Alexander von Humboldt named and located 186 tribes on the Orinoco and its affluents alone; but renounced as hopeless the attempt to give them a linguistic classification.* I shall not attempt to unravel the tangled ethnography of this region farther than to mention those tribes concerning whom specimens of language or the statements of European visitors permit a reasonable guess as to their affinities.

Something over a century ago, when Father Gilii wrote, largely from personal knowledge, his description of the tribes on the Orinoco and its affluents, he believed they could be included in nine linguistic stocks,† as follows:

*The list is given in his *Personal Narrative of a Journey in the Equinoctial Regions of America*, Vol. VI., pp. 354-358, of the English translation (London, 1826).

†F. S. Gilii, *Saggio di Storia Americana*, Tom. III., Lib. III.,

1. The *Carib* in a number of dialects, as the Tamana, the Paiura, the Quiri-Quiripa, the Mapuya, the Guanero, the Guayquira, the Palenque, the Maquiritare, the Oje, the Mucuru, and others.

2. The *Saliva*, to which he assigned the dialects Ature, Piaroa and Quaqua.

3. The *Maipure* (Arawak), in its dialects Avane, Meepure, Cavere, Parene, Guipunave, and Chirupa.

4. The *Otomaca*, with one dialect, the Tarapita.

5. The *Guama*, with its dialect, the Quaquaro.

6. The *Guayba*, related to the Chiricoa.

7. The *Jaruri* (*Yarura*).

8. The *Guarauna*.

9. The *Aruaca*.

This classification can stand as only approximately accurate, but it serves as an excellent starting point.

Beginning with the Carib stock, and basing my list on the works of Codazzi and more recent travelers, especially Crévaux, Coudreau and Chaffanjon, I offer the following as the tribes which may be definitely located as its members:

CARIB SUB-STOCK IN THE ORINOCO REGION.

Amarizonas (*Amarisanes*), near the Rio Guaviare and Rios Etari and Ayrico.

Arecunas, on head-waters of the Rio Caroni.

Ariguas, near the Rio Tauca.

Cabiunes, on the Rio Apoporis.

Carataimas, on the Rio Cauca.

Chaymas, on the Rio Guarapiche.

cap. 12 (Roma, 1782). In speaking of *lengue matrici*, he says positively, "In tutta l'estensione del grande Orinoco non ve ne sono che nove," p. 204.

Cucciveros, on the Rio Cauca.

Cuneguaras, on the Rio Maturin.

Enaguas, on the Rio Agua Branca.

Guarives, on the Rio Uñare.

Maquiritares, on the Orinoco, near Lake Carida and Rio Ventuari.

Matanos, on Rio Caura.

Mucos, on Rio Apoporis.

Panares, on Rio Caura.

Parecas, on the lower Orinoco.

Paudacotos, near the Rio Caura.

Quiri-Quiripas, on the lower Orinoco.

Quivas, on the Orinoco near the confluence of the Meta.

Tamanacas, on lower Orinoco.

Tuapocos, on the Rio Maturin.

Vayamanos, on the Rio Paragua.

Yaos, on the Rio de la Trinidad.

Yocunos, on the Rio Apoporis.

Even when Codazzi collected his material, more than half a century ago, the once powerful Tamana-cas had entirely disappeared, and no tribe of the name existed in the region.* The process of dissolution and destruction has gone on since his day with increasing rapidity, so that when Chaffanjon visited the Orinoco and Caura in 1884, he found that immense and fertile region almost uninhabited, the ancient tribes scattered and disappeared, or existing only in wretched remnants, *misérables débris*, of their former selves.† The opportunity is forever lost, therefore, to define the ethnography of this region by original observation, and we are thrown back on the collections and statements of former observers.

The Maquiritares, however, still remain as one of

* Aug. Codazzi, *Geografia de Venezuela*, pp. 247, 248 (Paris, 1841).

† J. Chaffanjon, *L'Orénoque et le Caura*, p. 247 (Paris, 1889).

the handsomest peoples on the Orinoco, and remarkable for the skill with which they manufacture canoes sixty or seventy feet long from the trunk of a single tree.*

On the river Uaupes, an affluent of the Rio Negro, M. Coudreau encountered various tribes, such as the Tarianos or Javis and the Nnehengatus, of whose tongues he obtained brief vocabularies. They indicate a distant influence of the Carib stock, especially the latter, but they seem mixed largely with elements from other sources.† They dwell adjacent to the Tucanos, to whom I have already referred as assigned by some to the Tapuyas. (See above, p. 240.)

Gilii's second group, the *Salivas*, offers difficulties. There appears to be none of them under that name at present on the Orinoco. Chaffanjon states that the Atures have become extinct.‡ The Piaroas survive, but the tribe so-called to-day speak a tongue wholly unlike the Saliva, and unconnected, apparently, with any other stock;§ and the modern Quaquas (Guagues) speak a dialect of the Arawak. Yet a hundred and fifty years ago the missionaries estimated the Salivas at four thousand souls. They lived principally on the river Cinareuco, below the Meta, and also on the Rio Etari, where they were in contact with the Carib Amarisanes. They are described as of a kindly and

* Michelena y Rojas, *Exploracion Oficial de la America del Sur*, p. 344 (Bruselas, 1867).

† A. Coudreau, *Archives de la Société Américaine de France*, 1885, p. 281.

‡ *L'Orénoque et le Caura*, p. 183.

§ See the Vocabularies.

gentle disposition, well-made in body and willing scholars of their spiritual masters. In their heathendom they had the unique custom of disinterring the bones of their dead after the expiration of a year, burning them, and then collecting the ashes to mix with their drinking water.* Their language, which was vocalic and nasal, has been preserved in sufficient specimens to serve for comparison. According to Vergara y Vergara, it is still spoken on the banks of the Meta,† and Hartmann includes in those who employ it, the Quevacus and Maritzis, at the head of the Ventauro, and the Mayongcong on the Merevari.‡

The Arawak stock, which Gilii calls the *Maipure*, had numerous branches in this region. They occupied much of the Orinoco in its middle and upper course, as well as the valleys of its affluents. Gumilla speaks of one of its members, the Caveres, as savage and inhuman warriors, but as the only nation which had been able to repulse the attacks of the down-river Caribs, who were accustomed to ascend the stream in fleets of eighty to a hundred canoes, destroying every village on its banks.§

* Consult J. Cassani, *Historia de la Provincia de la Compañia de Jesus del Nuevo Reyno de Granada*, fol. 170, 227 (Madrid, 1741); and Joseph Gumilla, *El Orinoco Ilustrado y Defendido*, p. 65 (Madrid, 1745).

† Quoted by Aristides Rojas, *Estudios Indigenas*, p. 183 (Caracas, 1878). This work contains much useful information on the Venezuelan languages.

‡ Jorge S. Hartmann, "Indianerstämme von Venezuela," in *Orig. Mittheil. aus der Ethnol. Abtheil. der König. Museen zu Berlin*, 1886, s. 162.

§ Joseph Gumilla, *El Orinoco*, p. 66.

The same authority mentions the Achaguas as possessing the most agreeable and cultured dialect, though he is in doubt whether it is strictly related to the Maipure. This nation, quite prominent in the older annals, still existed in the middle of this century to the number of five hundred on the Rio Muco. They were not civilized, and practiced the customs of polyandry and the destruction of female infants.* Cassani refers to them as on the river Ele, and describes them as tattooed and painted, with well-formed bodies and taking great pride in preserving and dressing their magnificent hair.†

From a variety of sources at my disposition I have prepared the following list of the

ARAWAK SUB-STOCK IN THE ORINOCO REGION.

Achaguas, on Rio Ele and Rio Muco.

Amoruas, on Rio Vichada.

Avanenis, on Rio Guainia.

Banivas, see *Manivas*.

Bares, on Rios Baria and Guainia.

Cabacabas, between Rios Yapura and Apoporis.

Cafuanas, on Rio Yapura.

Carusanas, on the Guainia and Inirida.

Cauiris, right bank of Rio Guaviare.

Caveres (*Cabres*), on Rio Zama and Orinoco near it.

Chirupas, on the Rio Zama.

Guaripenis, on Rio Guainia.

Guaypunavis (*Guipunavis*), on Lake Inirida.

Macuenis, on Rio Guainia.

Manivas (*Banivas*, *Manitivas*), on Rio Guaviare and Rio Negro and their affluents.

* Felipe Perez, *Geografia del Estado de Cundinamarca*, p. 109.

† *Historia de la Provincia de Granada*, pp. 87, 93. He calls them a "nacion suave y racional."

Maipures, on middle Orinoco.

Moroquenis, on Rio Yapura.

Mituas, on Lake Inirida.

Moruas, on Rio Yapura.

Parenes, on middle Orinoco.

Piapocos, near mouth of Rio Guaviare.

Uaupes, on Rio Uaupes (?).

Yaviteris, on Rio Atabapo.

The *Otomacos* remain, as Gilii placed them, an independent stock, with their single dialect, the *Tarapita*. The Jesuits first encountered them in 1732, amid the forests south of the Orinoco, between the Paos and the Jaruros. In later years they are described as a low grade of savages, given to the eating of earth. They are also said to be monogamous, and the women among them enjoy an unusual degree of consideration, being permitted to take equal part in the public games.* Their present locality appears to be on or near the river Meta.

The tribes whom Gilii mentions as the *Guamas* and *Quaquaros* lived on the banks of the Rio Apure, and in his day had the reputation of "a numerous and valorous people."† They were not unacquainted with some of the arts, and were particularly skillful in the manufacture of small figures in terra cotta, many of which are to be picked up on the sites of their ancient villages. Now, however, they have been smitten with the fate of their race, and are reduced to a few miserable vagrants, destined to disappear wholly in a few years. Their arts are lost, and

* Felipe Perez, *Geografia del Estado de Boyuca*, p. 136.

† G. D. Coleti, *Dizionario Storico-Geografico dell' America Meridionale*, Tom. I., p. 164 (Venezia, 1772).

the oppression of the whites has driven from them all hopes of bettering their condition.*

Of their language I have no specimens. According to Felipe Perez, it is related to the Omagua, and hence should be included in the Tupi stock; but this writer is not always dependable.

The *Guaybas* (Guahibos) and Chiricoas dwelt originally on the broad plains between the Casanare and Meta rivers; but a number of them were converted in the latter half of the seventeenth century and persuaded to come to the missions. They soon returned to their roving life. Cassani speaks of them as of mild and friendly disposition, but incorrigible vagabonds, "the gypsies of the Indies," constantly migrating from place to place.† They have never lost their love of the wilderness, and it has been their salvation, for they still survive—quite a numerous people—on the left bank of the Orinoco, from the Rio Meta to the Vichada. They are rebellious to all attempts at civilization, and the white man is not safe who ventures into their territory.‡

Humboldt, in his discussion of the tribes of the Orinoco, refers to the Guahibos as white in color, and founds some speculations on this fact. Their hue is indeed light, at times what may fairly be

* J. Chaffanjon, *L'Orénoque et le Caura*, p. 121.

† "Los Gitanos de las Indias, todo parecido en costumbres y modo de vivir de nuestros Gitanos." Cassani, *Hist. de la Prov. de Granada*, p. 111. Gumilla remarks: "De la Guajiva salen varias ramas entre la gran variedad de Chiricoas." (*El Orinoco Ilustrado*, etc. Tom. II. p. 38.)

‡ Chaffanjon, *L'Orénoque et le Caura*, pp. 177, 183, 187, 197.

called a dirty white; but in this respect we are assured by recent and competent authority they do not differ from their neighbors, the Maquiritares and Piaroas. It is not a question of descent, but of climatic surroundings and mode of life.*

The home of the *Jaruris*, Yaruros, or, as they called themselves, Japurin, was on and near the Orinoco, between the rivers Meta and Capanapaco. They depended on hunting and fishing, and were indolent and averse to agriculture. They had few arts, but were friendly in disposition, not given to drunkenness, and usually monogamous. At present they number scarcely a hundred individuals, badly formed, afflicted with contagious diseases, and rapidly on the road to extinction. They have lost their trait of sobriety, and a man will readily offer his wife or daughter in exchange for a bottle of brandy. (Chaf-fanjon.)

The *Guaraunos*, called by the English *Warraus*, continue to live in considerable numbers—some say about fifteen thousand—in and near the delta of the Orinoco. They are a thrifty, healthy people, building their houses ingeniously upon piles to protect them from the periodical overflows of the stream. This method of construction, however, was adopted only when they sought as refuge marshy and lonely spots to escape their enemies. Contrary to the statements of most travelers, those who know them best report them as preferring dry uplands, where they

*The subject is fully discussed from long personal observation by Michelena y Rojas, *Exploracion Oficial de la America del Sur*, p. 346.

make clearings, plantations and houses with singular industry and skill. The favorite wood used in such construction is the *temiche* (not the *moriche*) palm, which they call, from its magnificent fronds, "the feathers of the sun," *ya juji*.*

Humboldt placed their number at the beginning of the century at about six thousand, which is doubtless more correct than the later estimates. He adds that the Guayquiries, who inhabited the peninsula of Araya and the adjacent islands of Margarita, "admit the relationship of their language with that of the Guaraunos."† At the beginning of the last century Gumilla found them living on the south bank of the Orinoco in a most wretched condition and nearly annihilated by their merciless enemies, the Caribs. It is probable, therefore, that they removed from that location to the coast.‡ No other dialect of the tongue, so far as I know, has been discovered, and it seems an independent stock.

In appearance they are dark in hue, of muscular build, hair black, abundant and very fine, noses

* See the observations of Level in Michelena y Rojas, *Exploracion Oficial de la America del Sur*, p. 148, sq. The Guaraunos are also well described by Crevaux, *Voyages dans l'Amérique du Sud*, p. 600, sqq. (Paris, 1883), and J. Chaffanjon, *Archives de la Société Américaine de France*, 1887, p. 189. Im Thurn draws a very unfavorable picture of them in his *Indians of British Guiana*, p. 167.

† A. Von Humboldt, *Personal Narrative*, Vol. III., p. 216 (Eng. trans. London, 1826).

‡ Joseph Gumilla, *L'Orinoco Ilustrado*, Tom. II., p. 66. They spoke Carib to him, but that was the *lengua general* of the lower river.

straight and well-shaped, skull brachycephalic, stature below medium.

The *Aruaca* mentioned by Gilii were some tribes of the Arawaks who occasionally visited the southern bank of the Orinoco, and whose relations to the Maypures were not known to him. They are also mentioned by other authors.

Having thus reviewed the linguistic stocks named by Gilii, I shall proceed to mention some which escaped his attention.

One of the most interesting of these is the *Betoi*, or *Betoya*. This tongue derived its name from a tribe dwelling at the foot of the mountains of Bogota, between the rivers Apure and Tame, and are therefore included by some among the Indians of New Granada. From a number of authorities I find the following members are attributed to the

BETOYA LINGUISTIC STOCK.

Airicos, on head-waters of the Manacacia, the Ele and Guainia.

Amaguages, near Rio Caqueta.

Anibalis, on Rio Apure.

Betois, on and near Rio Casanare, about north latitude 5°.

Correguages, on Rio Yari and head-waters of Caqueta.

Jamas, on Rio Manacacia.

Macaguages, on Rios Caucaya, Mecaya and Sensella.

Piojes, on Rio Putumayo, and on the Napo and Caucaya (Cocayu).

Quilifayes, on Rio Apure.

Situfas, on Rio Casanare.

Tamas, on the Rio Yari and Rio Caguao.

Tunebos, in the Cordillera, adjacent to the Betois.

Of these, the Piojes and Correguages, of which we have vocabularies, do not show close resemblance to

the Betoya, yet undoubtedly some;* so I place them in this stock partly in deference to old authorities.

The Piojes derive their name from the particle of negation in their language, this being their usual reply to all inquiries by traders or travelers. They are divided into two bands, speaking the same dialect, one on the Napo and one on the Putumayo, neither knowing anything of the other. Some of their customs are peculiar. For instance, it is their rule that a widow shall take her son, a widower his daughter, to replace the deceased consort.† They are somewhat agricultural, and are skilful boatmen.

The Tamas formerly lived on the river Aguarico (Coleti). Dr. Crevaux found them on the Caguo, a branch of the Yapura, and obtained from them a short vocabulary, but enough to mark them as members of the stock.‡ There are also some on the Rio Meta who speak Spanish only. (Perez.)

The Betoya has impressed me as showing some distant affinity to the Choco stock, and it may be that ampler resources on both sides would lead to the establishment of an original identity. The following words from the very scanty number which I have for comparison are noteworthy:

* A description of the Correguages and a vocabulary of their dialect are given by the Presbyter Manuel M. Albis, in *Bulletin of the Amer. Ethnol. Soc.*, Vol. I., p. 55.

† Arthur Simpson, *Travels in the Wilds of Ecuador*, p. 196 (London, 1886). In his appendix the author gives a vocabulary of the Pioje (and also one of the Zaparo).

‡ Printed in the *Bibliothèque Linguistique Américaine*, by M. L. Adam, Tome VIII., p. 52.

	CHOCO STOCK.	BETOYA STOCK.
Man,	<i>uma-china,</i>	<i>uma-soi, emi-ud.</i>
Woman,	<i>uerá,</i>	<i>ro.</i>
Fire,	<i>tújoor,</i>	<i>toa, tui.</i>
Ear,	<i>juru,</i>	<i>ca-joro-so.</i>
Nose,	<i>jun,</i>	<i>ju-saca, jin-quepui.</i>

The Choco *do*, river, seems related to the Betoya *ocu-du*, water.

The Macaguages are industrious and agricultural. Both sexes dress alike in cotton tunics dyed of a violet color, and suspend bright feathers and strings of beads in ears, nose and lips.*

A singular question has arisen as to the relationship of the Betoya and the Yarura languages. Their near connection was affirmed by the early missionaries. In fact, the history of the conversion of the Betoyas turns upon the identity of the two tongues. It was brought about in 1701 by a Yarura Indian, a convert to Christianity, who accidentally discovered that he was understood by the Betoyas.

In spite of this detail, it is evident from an inspection of the vocabularies, that there is absolutely no relationship between the two idioms. I can only explain the contradiction as arising from some ambiguity or similarity of names. The two tribes lived together in the time of Gumilla, making up about three thousand souls.†

* Manuel P. Albis, in *Bull. of the Amer. Ethnol. Society*, Vol. I., p. 55.

† See the account in the interesting work of Father Cassani, *Historia de la Provincia de la Compania de Jesus del Nuevo Reyno de Granada*, pp. 231, 232, 257, etc. (Madrid, 1741). He describes the Jiraras as having the same rites, customs and language as the Airi-

About the middle of this century some six hundred of the Betoyas dwelt on the head-waters of the river Manacacia.*

In the territory of St. Martin, above the falls of the Guaviare and along the Rio Guejar and the Meta, are several tribes asserted to speak related dialects, but of which I have little information. The principal one is that of the *Churoyas*, of whom Professor Nicolás Saenz has given an interesting sketch and a short vocabulary.† They are very ugly, with broad faces, low foreheads, small and oblique eyes, and in color like dried tobacco. Nudity is their usual garb, and the skin is decorated with tattoo marks instead of clothing. According to Perez they number about 1200.‡ Following him and other authorities, I may enumerate the following members of the

CHUROYA LINGUISTIC STOCK.

Bisaniguas, on the Rio Guejar.

Choroyas, on the Rio Guejar.

Cofanes, on the Rio Aguarico.

Guayues, on the Rio Caqueta.

Macos, on the Rio Aguarico.

Whether the Cofanes here named are those of the

cos on the river Ele, p. 96. Gumilla makes the following doubtful statement: "De la lengua Betoya y Jirara, que aunque esta gasta pocas *erres*, y aquella demasiadas, ambas quieren ser matrices, se derivan las lenguas Situfa, Ayrica, Ele, Luculia, Jabue, Arauca, Quilifay, Anaboli, Lolaca, y Atabaca." (*El Orinoco Ilustrado y Defendido*, Tom. II., p. 38, Madrid, 1745.)

* Felipe Perez, *Geografía del Estado de Cundinamarca*, p. 113.

† In the *Zeitschrift für Ethnologie*, 1876, s. 336, sq.

‡ *Geografía del Estado de Cundinamarca*, p. 114 (Bogota, 1863).

Province of Quitu who murdered the Jesuit missionary, Raphael Ferrer, in 1602, I have not discovered. Perez describes them as still warlike and seclusive, living in the terminal hills of the Cordillera, and avoiding traffic with the tribes of the lower river.*

An examination of the vocabulary furnished by Saenz inclines me to think that the Churoya may be a mongrel dialect, or at least has borrowed freely from neighboring stocks. I subjoin the principal words from his short vocabulary, with some comparisons:

Sun,	<i>mshojaint.</i>
Moon,	<i>juimit</i> (<i>oamito</i> , Guahibo).
Fire,	<i>hijit</i> (<i>chichi</i> , = sun, Carib).
Water,	<i>mintá.</i>
Bow,	<i>piranso</i> (<i>paria</i> , Roucouyenne).
Arrow,	<i>funait.</i>
Tobacco,	<i>joo.</i>
Plantain,	<i>parasa.</i>
Dog,	<i>uilg.</i>
Tortoise,	<i>ainjachie.</i>
Wind,	<i>che.</i>
Skin,	<i>begt.</i>

The *Piaroas* are mentioned by Gilii as a branch of the Salivas, but their language reveals no such connection. They are still found on both banks of the Orinoco above the confluence of the Vichada and near the mouth of the Mataveni. They are savage and superstitious, avoiding contact with the whites; they have had good reason to be extremely distrustful of the advances of their civilized neighbors. They are much given to nocturnal ceremonies, and enter-

* *Ibid.*, *Geografia del Estado de Cauca*, p. 313.

tain a great respect for the tapir, who is their reputed ancestor, and also the form which is taken by the souls of the departed.*

The *Puinavis* dwell on the Inirida, an affluent of the Guaviare. A tribe, the Guipunabis, is mentioned by Gilii as belonging to the Maipure (Arawak) stock; but it cannot be the same with the one under consideration, the language of which appears to be without affinities. Latham identified them with the *Poignavis* of the older writers, and on slight linguistic evidence, believed them connected with the Banivas.† My own comparisons do not justify this opinion.

8. *The Upper Amazonian Basin.*

No portion of the linguistic field of South America offers greater confusion than that of the western Amazonian region. The statements are so conflicting, and the tribal changes apparently so rapid, that we are at a loss to bring modern observations into accord with older statements. Thus, I am entirely unable to accept the linguistic classification of Hervas, which certainly was based on the best information of his day. As a matter of comparison I give it.

* Chaffanjon, *ubi supra*, p. 203.

† He gives *oueni*, water, *zenquerot*, moon, as identical in the Puinavi and Baniva. The first may pass, but the second is incorrect. See his remarks in A. R. Wallace, *Travels on the Amazon and Rio Negro*, p. 528 (London, 1853). A vocabulary of 53 Puinavi words is furnished from Dr. Crévaux's notes in Vol. VIII. of the *Bibliothèque Linguistique Américaine* (Paris, 1882).

List of Languages in the Governments of Maynas and the Marañon (Hervas).

STOCKS.	DIALECTS.	STOCKS.	DIALECTS.
1. ANDOA.	{ Araro.	8. MAINA.	{ Chapo.
	{ Chuudaviño.		{ Coronado.
	{ Gae.		{ Humurano.
	{ Guazago.		{ Roamaino.
	{ Murato.	9. MUNICHE.	{ Muchimo.
	{ Pabo.		{ Otanabe.
	{ Pinche.	10. PANA.	{ Iltipo.
2. CAMPA.	{ Simigae.		{ Pelada.
	{ Bobonazo.	11. PIRA.	{ Eusitinavo.
	{ Amjemhuaco.		{ Manatinavo.
	{ Curano.		{ Upatarinavo.
	{ Manua.	12. SIMIGAE.	{ Arazo.
3. CHAYA-VITA.	{ Nanerua.		{ Ijinori.
	{ Nesahuaco.		{ Nevo.
4. COMABA.	{ Sepaunabo.		{ Oa.
	{ Tasio.		{ Zaparro.
	{ Cahuapano.	13. LUCUMBIA.	{ Putumayo.
5. CUNIBA.	{ Paranauro.		{ Yete.
	{ Ginua.		{ Ceoqueyo.
	{ Inuaco.	14. URARINA.	{ Barbudo.
6. ENCABELLADA.	{ Ruanababo.		{ Itucalc.
	{ Zepo.		{ Mayoruño.
	{ Manamabobo.	15. YAMEA.	{ Musimo.
7. IEBERA.	{ Mananama-bua.		{ Amaono.
	{ Guajoyo.		{ Nahuapo.
	{ Guencoyo.		{ Napeano.
	{ Neocoyo.		{ Masamae.
	{ Zaparro, or Encabellado.	16. JINORI.	{ Acamaori.
	{ Ziecoyo.		{ Camacori.
	{ Tiputini.		{ Iqueconejori.
	{ Tibilo.		{ Panajori.
			{ Tremojori.

A slight examination of this classification suffices to reveal its general inaccuracy. The Zaparos are

included in both the Encabellada and the Simigae stocks. The latter is given both as a stock and as a dialect of the Andoa. In fact, all three of the stocks named belong together as dialects of one. The Pano stock, as we now know it, appears scattered under Cuniba, Urarina and Pana; and the arrangement is incorrect in many other points. While it has a value in preserving the names of some now missing tribes, as a linguistic scheme it is wholly unsafe.

The *Zaparos* constitute one of the most extended and numerous nations in the upper valley of the Amazon. They dwell near or adjacent to the Jivaros on the south, and as their name is variously spelled Zaparos, Xeberos and Jeberos, they have at times been confounded with them. They differ, however, not only in language, but in appearance and temperament. The Zaparos are lighter in color, smaller in stature, with oblique eyes, large mouths, and expanded nostrils.* Their disposition is indolent and easy tempered, and their abilities inferior. This is seen in the construction of their houses and the appearance of their fields, which do not compare advantageously with those of the Jivaros; but they display some ingenuity in manufacturing clothing from the bark of a species of *Ochroma*, and they are skillful in concocting the urara poison, in making blow-pipes, and are daring boatmen.

In 1632 they lived near the Omaguas, on the river Curary, and their number was estimated by the mis-

* Ed. André, in *Le Tour du Monde*, 1883, p. 406. But Osculati describes them as tall and fine-looking, with small mustaches. *Esplorazione delle Regioni Equatoriali*, p. 164, sq. (Milano, 1850).

sionaries at 10,000. At present, their main body dwells between the rivers Pastaza and Napo and along the Marañon between the rivers Zamora and Morona. In 1850 Osculati estimated their number at over 20,000, which is certainly in excess of their present representatives. The many small tribes into which they are divided, and the confused orthography of the names applied to them, render it difficult to offer a satisfactory list. It seems tolerably certain that the ancient "Andoas" were the Zaparos of the upper Pastaza,* and equally sure that the Encabellada, the Iebera, the Simigae and the Jinori languages, all supposed by Hervas to be independent stocks,† were spoken by members of the Zaparo family. The Iquitos are another populous branch, sometimes supposed to be distinct.

The Zaparo language is agreeable to the ear, partaking of the phonetic character of the Brazilian idioms. The Italian traveler, Osculati, has furnished a very satisfactory account of it, both grammatical and lexicographical,‡ and there are vocabularies by other voyagers.

I offer the following alphabetic list of the sub-tribes

*This opinion is supported by Hamy, Villavicencio, and other good authorities.

† Hervas, *Catal. de las Lenguas Conocidas*, Tom. I., p. 262. The term *Encabellados* was applied to the tribe from their custom of allowing the hair to grow to the waist. (*Lettres Edifiantes*, Tom. II., p. 112). The *Pater Noster* in the Encabellada dialect is printed by E. Teza in his *Saggi Inediti di Lingue Americane*, p. 53 (Pisa, 1868).

‡ In the closing chapters of his *Esplorazione*, above quoted.

of the Zaparos, without attempting to define their several positions in the general district referred to:

ZAPARO LINGUISTIC STOCK.

<i>Achuales.</i>	<i>Curyies.</i>	<i>Macavinas.</i>	<i>Putumayos.</i>
<i>Agapicos.</i>	<i>Curarayes.</i>	<i>Mautas.</i>	<i>Quirivinas.</i>
<i>Aicores.</i>	<i>Custimanos.</i>	<i>Moronas.</i>	<i>Rotunos.</i>
<i>Andoas.</i>	<i>Cutinanas.</i>	<i>Mueganos.</i>	<i>Semigaes.</i>
<i>Anguteris.</i>	<i>Encabellados.</i>	<i>Muratos.</i>	<i>Shiripunas.</i>
<i>Antires.</i>	<i>Eriteynes.</i>	<i>Napotoas.</i>	<i>Tabalosos.</i>
<i>Araros, or</i>	<i>Frascavinos.</i>	<i>Neocoyos.</i>	<i>Tiputinis.</i>
<i>Arazos.</i>	<i>Gaes.</i>	<i>Nepas.</i>	<i>Tivilos.</i>
<i>Ayacares.</i>	<i>Ginoris.</i>	<i>Nerecamues.</i>	<i>Tremajoris.</i>
<i>Bobonazos.</i>	<i>Gualaquizas.</i>	<i>Nushinis.</i>	<i>Yasunis.</i>
<i>Cahuaches.</i>	<i>Guazacas.</i>	<i>Oas.</i>	<i>Yegueyos.</i>
<i>Chudavinos.</i>	<i>Himuetacas.</i>	<i>Panajoris.</i>	<i>Yetes.</i>
<i>Churitunas.</i>	<i>Huasimoas.</i>	<i>Paranapuras.</i>	<i>Zamoros.</i>
<i>Comacoris.</i>	<i>Ibanomas.</i>	<i>Pastazas.</i>	<i>Zapaos.</i>
<i>Conejoris.</i>	<i>Incuris.</i>	<i>Pavos.</i>	
<i>Copatasas.</i>	<i>Itremajoris.</i>	<i>Pindis.</i>	

On the mountain slope of the Cordillera, north of the Zaparos and east of the Cañaris, are the *Jivaro*s (Givaros, Xivaros), a wild, warlike tribe, never subjugated either by the Kechuas or the Spaniards. Their homes are about the head-waters of the rivers Pastaza, Santiago, and other affluents of the Marañon. They are rather tall, of light color, with thin lips, aquiline noses, straight eyes, prognathic jaws, hair black or with a reddish tinge.

Some say their various bands number as many as four hundred, named from the streams on which they live. Most of them depend on hunting and fishing, others pursue agriculture and breed pigs. Their weapons are the sarbacane, the lance, the bow and the shield. They have developed a system of sound-

signalling or telegraphy by means of large wooden drums placed at certain distances apart, by beating on which in a peculiar manner the advent of an enemy, his number and direction, can be heralded over hundreds of square miles in a few hours. The Jivaros are celebrated for the preparation of human heads by a process of boiling and drying so as to preserve the hair and soft parts. Many of these trophy heads have been brought to Europe, and their purpose has led to some discussion. It appears that they are prepared both as trophies of victory and out of reverence to departed chiefs.* Their houses are built solidly of wood, with wooden doors. They sleep upon wooden frames, and construct tools of the same material.†

The principal event in their history was their revolt against the Spanish authorities in the year 1599. They destroyed many settlements and the entire city of Logroño, carrying the women into captivity. Many of them had already been converted to Christianity, and their rites are said still to preserve some reminiscences of such teachings. In recent years many of them have been civilized through the efforts of Italian missionaries.

The language of this important nation, although early studied, has as yet no printed literature. I have found of it only the first five numerals, which do not

* An excellent article on the ethnography of this tribe is the "Osservazioni Ethnografiche sui Givari," by G. A. Colini in *Real. Accad. dei Lincei*, Roma, 1883. See also Alfred Simpson, *Travels in the Wilds of Ecuador*, p. 91, sq. (London, 1886).

† Ed. André, in *Le Tour du Monde*, 1883, p. 406.

seem to have connection with any other tongue. They are as follows:

1. *Alza*; 2. *catuta*; 3. *kala*; 4. *ingatu*; 5. *aley-ticlon*.*

From a study of proper names and ethnographic traits, Dr. Hamy has expressed himself with great assurance that the Jivaros belong to the Guarani group of the Tupi stock;† but the above numerals do not indicate such relationship, nor do I think that his other arguments establish it. For the present they must be considered an independent stock.

JIVARO LINGUISTIC STOCK.

Antipas, above the Pongo de Manseriche.

Aguarunas, below the mouth of the Rio Nieva and Rio Huallaga.

Ayulis, on the Rio Morona.

Cherembos, left bank of Marañon.

Chirapas.

Huambisas, on Marañon above the Pongo de Manseriche.

Lojanos.

Muratos, below mouth of the Rio Pastaza.

Pautis.

Uambisas, south of the Marañon.

Zamoras.

The eastern neighbors of the Jivaros are the scattered bands of the *Maynas*, separated by Hervas into two stocks, the *Maina* and the *Chayavita*, but so far as I can learn, without sufficient reason. The lan-

* Prof. Raimondi, in the *Anthropological Review*, Vol. I., p. 33, sq.

† "La communauté d'origine entre les Jivaros et les tribus du grand groupe guaranien se trouvera établie avec assurance." Dr. Hamy, "Nouveaux Renseignements sur les Indiens Jivaros," in the *Revue d'Anthropologie*, 1873, p. 390.

guage is or was spoken at the mission of the Concepcion on the upper Marañon and in the uplands around Cerros de Mainas. It is singularly harsh and difficult. The natives were wild, and lived by hunting and fishing. Their earlier home was on the upper waters of the Morona and Pastaza rivers.

The following bands are embraced in the

MAINA LINGUISTIC STOCK.*

<i>Cahuapanas.</i>	<i>Chayavitas,</i>	<i>Humuranos.</i>	<i>Roamainas.</i>
<i>Chapos.</i>	<i>Coronados.</i>	<i>Mainas.</i>	

On the Rio Javary there seem to be several independent stocks. One of these is that of the *Yameos*, who are found in the lower course of the river and also further up the Marañon, near Nauta, and on the Huallaga, where they are called *Llameos*, *Yameos*, *Lamas*, or *Lamistas*. Formerly they were a numerous and warlike nation, sharply divided into gentile organizations, and carefully refraining from inter-marriage in the gens. At an early date we hear of them between the Rio Tigre and the Napo. (Markham.)

The following sub-tribes are stated by various writers to belong to the

LAMA LINGUISTIC STOCK.

<i>Aguanos.</i>	<i>Cahuaches.</i>	<i>Nahuapos.</i>	<i>Yarrapos.</i>
<i>Alabonos.</i>	<i>Massamaes.</i>	<i>Napeanos.</i>	
<i>Amaonos.</i>	<i>Miquianos.</i>	<i>Parranos.</i>	

* The *Mithridates* (Bd. III., Ab. II., s. 592) gives from Hervas the Pater Noster in the Maina dialect. Professor Teza (*Saggi inediti di Lingue Americane*, pp. 54-57) has published the Pater Noster, Ave, Credo and Salve in the Cahuapana dialect. They differ but little.

Poeppig describes them as agricultural and industrious, and much given to trade and travel.

In appearance, they are small, dirty and Mongoloid, sharply contrasting with the Indians of the Huallaga, who are all tall, strong and well built, with good features.*

In conformity to old authorities, Markham classes the *Ardas* as a sub-tribe of the Yameos. Their home was between the rivers Napo and Masso. On the latter they were in immediate contiguity to the Massamaes (Coleti). There has been published a *Doctrina* in their language, from which the Lord's Prayer is quoted by Ludewig.† This version has no resemblance to the Pater in Yamea contained in the Mithridates; so for the present I leave the *Ardas* unclassified.

Higher up the river Javary are a number of tribes speaking related dialects of what I shall call the *Peba* stock, though there are some reasons to consider it a corrupt dialect of the Omagua, and hence related to the Tupi.

PEBA LINGUISTIC STOCK.

Caumaris.

Cauwachis.

Pacayas.

Pebas.

To this list I add the Yeguas, Yaguas or Yahuas, found in the same vicinity, and remarkable for their fine personal appearance, "the most perfect physical type," says M. Ordinaire, "of all the Indian races."‡

* See E. Poeppig, "Die Indiervölker des obern Huallaga," in his *Reise in Chile und Peru*, Bd. II., ss. 320, 321, 400, etc.

† *Literature of American Aboriginal Languages*, p. 12.

‡ Olivier Ordinaire, "Les Sauvages du Perou," in the *Revue d'Ethnologie*, 1887, p. 320.

The vocabulary of their language obtained by Castelnau shows unmistakable affinities to that of the Pebas.*

On the Rio Chambira, adjacent to the Yameos and Omaguas, dwelt in the early part of the last century the *Itucales* and Varinas or Uarunas, who, according to Coleti, spoke allied dialects. The *Itucales* were noteworthy as the aptest and most biddable converts obtained by the missionaries on the river. They were agricultural and monogamous.† *Hervas* classes them with the *Musimos*, the *Mayorunas* and the *Barbudos*, under the *Urarina* language; but the last two are members of the *Pano* stock.

The *Ticunas* (*Tecunas*, *Tucunas*), are found along the lower *Javary* and the *Solimoes*, adjacent to the *Pebas*. They wander about in a state of nakedness, depending on hunting and fishing, and under a loose control of the Brazilian government. Many of them can converse in *Kechua*, though their own tongue is of a different group. They are given to dances of a sacred character, in which the actors appear in masks.

* For example :

	YAHUA.	PEBA.
Bow,	<i>cano,</i>	<i>canou.</i>
Ear,	<i>on-tisiu,</i>	<i>mi-tiwi.</i>
Hair,	<i>rinoncay,</i>	<i>rainosay.</i>
Head,	<i>fi-rignio,</i>	<i>raino.</i>
Heart,	<i>hu-iachai,</i>	<i>ca-iishi.</i>
Forehead,	<i>uno,</i>	<i>nimo.</i>
Nose,	<i>uniron,</i>	<i>vinerro.</i>
Woman,	<i>huata,</i>	<i>uatoa.</i>

The *Yahua* has more *Kechua* elements than the *Peba*.

† *Lettres Edifiantes et Curieuses*, Tome II., p. 112.

An operation allied to circumcision is practiced on infants of both sexes at the time of assigning them names.* One of the several tribes called "Orejones" is thought by Poeppig to belong to the Ticunas.†

The tribes in the valley of the Huallaga were first visited by Franciscan missionaries in 1676. In that year Father Jose de Araujo converted a number of the Hibitos (Xibitos) in the Upper Huallaga, and wrote an *arte* of their language. He found it the same as that of the Chunchos in the Sierra. Their neighbors further down the river, the Cholones, speaking a different idiom, were brought under the instruction of Father Francisco Gutierrez, who composed a work on their tongue. A century later we find these two nations living together at the mission, counting 4800 souls, and occupying that portion of the province of Cajamarquilla between 7° and 8° 30' s. lat. They were peaceable and agricultural, with fields of cotton and food plants.‡

This fair scene disappeared in the turbulent life of the next generation, and when the traveler Poeppig visited the Huallaga in 1834 he found the mission in decay, and the natives, much reduced in numbers, had resumed their wild life and again become savages.§ At present, along the main stream to the

* Von Martius, *Ethnographie und Sprachenkunde Amerikas*, Bd. I., s. 445.

† *Reise in Chile und Peru*, Bd. II., s. 415.

‡ Jose Amich, *Compendio Historico de la Serafica Religion*, etc., pp. 77, 78.

§ E. Poeppig, *Reise in Chile und Peru*, Bd. II., s. 328 (Leipzig, 1836).

north, are the Cocamillas, the Aguantéas, and the Puinahuas. All these appear to be of the Tupi stock, with dialects akin to the Cocama and Omagua.*

The Panos. When the missionaries first crossed the Cordillera and explored the upper Ucayali river, they found a number of related tribes, the principal of whom were the Panos. By their traditions they had moved from near the equator at the north. They differed little in culture from their neighbors, and are now nearly extinct. By the earlier writers they were placed in relation to the Omaguas as members of the Tupi stock,† but the researches of M. Raoul de la Grasserie have vindicated for them an independent position.‡ They are said to have possessed a form of hieroglyphic writing, which they painted on a sort of paper manufactured from vegetable fibre.

Some of the Mayorunas are reported as having thick beards and white skins (Martius), but these peculiarities are probably attributable to early admixtures with the white race.

The largest of these tribes at present is that of the Conibos, who constitute now the greater part of the natives the traveler encounters on the Ucayali. In appearance they have some resemblance to the Peruvians. The nose is aquiline and prominent, the forehead broad, the eye large, and the cheek bones not

* Cf. Olivier Ordinaire, "Les Sauvages du Pérou," in *Revue d'Ethnologie*, 1887, pp. 316, 317.

† Von Martius, *Ethnog. und Sprach. Amerikas*, Bd. I., s. 435.

‡ *Compte-Rendu du Cong. Internat. des Américanistes*, 1888, p. 438.

prominent. In intelligence they are superior to their neighbors, learning the Spanish language readily, and proving themselves valuable house-servants. They are apathetic, however, and none of the Panos have shown any earnest desire to adopt a civilized life.*

The Cashibos are the most savage tribe on the Ucayali or its affluents, and are said to have the ugly custom of eating their relations when they die, and if this event is long delayed, the old men are killed. But such is the power of ideas, that one of the obstacles to their conversion is that they so much prefer their bodies to become food for their relatives than a feast for worms!†

The Pacaguaras or Pacavarás, on the rivers Beni and Mamore, classed by D'Orbigny as a separate stock, belong among the Panos, as is clearly seen by the vocabulary furnished by that traveler, and later that by Mr. Heath.‡ The easternmost branch of the stock (not noted by M. de la Grasserie), are the Canawarys (Canamarys), who live on the banks of the Purus. Mr. Chandless heard that they were related to the Conibos, and the few words he obtained of their language prove the statement correct.§

* See Dr. L. F. Galt, "The Indians of Peru," in *Report of the Smithsonian Institution*, 1877, p. 308, sq.

† Professor Antonio Raimondi, *Apuntes sobre la Provincia de Loreto* (Lima, 1862), trans. by Bollaert, in *Jour. Anthropol. Institute*. He states that they speak a dialect of Pano.

‡ D'Orbigny, *L'Homme Americain*, Tome II., p. 262.

§ W. Chandless, in *Jour. of the Royal Geog. Soc.*, Vol. XXXIX., p. 302; Vol. XXXVI, p. 118.

	PANO.	PACAGUARA.	CANAWARY.
Sun,	<i>bari</i> ,	<i>uari</i> ,	<i>wari</i> .
Fire,	<i>chi</i> ,	<i>chi-i</i> ,	<i>chi-i</i> .
Water,	<i>uaca</i> ,		<i>waka</i> .

Mr. Chandless also says, "The Conibos are of the same tribe at the Manitenerys of the river Purus," which would bring these latter also into the Pano stock. The short vocabulary of their language which he supplies does not bear out this assertion. Mr. Richard Spruce considered that it proved them to be of the Carib stock;* but to me it seems unmistakably a member of the Arawak family, as will be seen from the following analysis:

	MANITENERY.	ARAWAK STOCK...
Sun,	<i>cashí</i> ,	<i>catche</i> .
Moon,	<i>siri</i> ,	<i>casiri</i> .
Fire,	<i>chi-chi</i> ,	<i>chichi</i> .
Water,	<i>huni</i> ,	<i>uni</i> .

From the above considerations I offer the following names as comprising the

PANO LINGUISTIC STOCK.

Barbudos, on the Marañon.

Callisecas, on upper Ucayali.†

Canawarys, on Rio Purus.

* *Ibid.*, Vol. XXXVI., p. 123, note.

† The Callisecas are now no longer known by that name; but J. Amich has given sufficient reasons to identify them as the ancestors of the tribe later known as the Setibos. See his *Compendio Historico de la Serafica Religion en las Montañas de los Andes*, p. 29 (Paris, 1854). Lieutenant Herndon, however, who describes them as wearing beards, believed they were the ancient Cashibos (*Exploration of the Valley of the Amazon*, p. 209. Washington, 1853).

Caripunas, near cataracts of Rio Madeira.

Cashibos, on Rio Pachitea and Aguaitia.

Chamicuros, on west bank of the Rio Huallaga.*

Cochivuinás, a sub-tribe of Mayorunas.

Conibos, on upper Ucayali.

Culinos, on Rio Juvary.

Jaunavos, see *Caripunas*.

Mayorunas, on Rio Tapichi and Rio Yavari.

Maxorunas, near Rio Tapichi.

Panos, on upper Ucayali.

Pacaguaras, on Rio Beni.

Remos, on Ucayali, from Abayan to Chanchaguaya.

Sencis, right bank of Ucayali above Saraycu.

Setibos (*Setevos*), on upper Ucayali.†

Sipibos, on upper Ucayali.

Mr. Chandless met on the rivers Purus and Jurua tribes of a stock whose tongue I have not been able to connect with any other. They are represented on the former stream by the Pammanas or Pammarys (*pama-ouiri*, eaters of the *pama*, a kind of berry), or Puru-purus (*piru-poru*, name of a skin disease which prevails there), whose name has been transferred to the river. These are believed by Martius to be the same or allied to the Pamas, a tribe who formerly lived on the Madeira, but were driven thence by the Caripunas.§ On the Jurua are the

* According to Veigl. See *Mithridates*, III., II. 580, 581, 583.

† Called also *Mananaguas*, "mountaineers," and believed by Waitz to have been the *Manoas* among whom an old missionary found an elder of the tribe rehearsing the annals of the nation from a hieroglyphic scroll (*Anthropologie der Naturvölker*, Bd. III., s. 541). The real *Manoas* or *Manaos* belong to the Arawak stock.

‡ W. Chandless, in *Journal of the Royal Geographical Society*, Vol. XXXVI., p. 118; Vol. XXXIX., p. 311.

§ *Ethnographie und Sprachenkunde*, Bd. I., s. 414.

apparently related *Arauas* and *Araicus*. All these depend on hunting and fishing, and are of migratory habits. Some of the *Pammanas* are reported as light in hue, with blue eyes and brown hair.*

Many tribes with names differing from the above are recorded by the older writers as resident on these rivers, but owing to the absence of linguistic material, no identification is possible.

The close relationship of the *Pammarys* of the *Purus* and the *Arauas* of the *Jurua* is shown by the following comparison:

	PAMMARY.	ARAUA.
Moon,	<i>massicu,</i>	<i>massicu.</i>
Fire,	<i>si ju,</i>	<i>sihu.</i>
Water,	<i>paha,</i>	<i>paha.</i>
Dog,	<i>djuimahi,</i>	<i>jumayhi.</i>

So far as known, I would place the following tribes in the

ARAUA LINGUISTIC STOCK.

Arauas (*Araó*), on the lower *Jurua*.

Pamas, formerly on the *Madeira*.

Pammarys, on the *Rio Purus*.

Puru-purus, on the *Rio Purus*.

The jargon of the *Yaguas*, on the *Amazon* between *Nauta* and *Pebas*, seems to have borrowed from this stock; as:

	YAGUA.	PAMMARY.
Sun,	<i>ini,</i>	<i>saf-iny.</i>
Water,	<i>haha,</i>	<i>paha.</i>

The neighbors of the *Arauas* on the river *Purus*:

* Von Martius, *Ibid.*, p. 422.

are the *Hypurinas* (better *Jupurinas*) of whose language Mr. Chandless also supplies a short vocabulary. It contains a few words in common with the Pammary, but probably only borrowed by both from the Arawak. The following will illustrate the two tongues:

	PAMMARY.	JUPURINA.
Sun,	<i>safiny,</i>	<i>atocanti.</i>
Moon,	<i>massicu,</i>	<i>cassiri.</i>
Fire,	<i>siju,</i>	<i>chamina.</i>
Water,	<i>paha,</i>	<i>iborahai.</i>
River,	<i>wainy,</i>	<i>weni.</i>
Dog,	<i>djuimahi,</i>	<i>anguity.</i>
Tortoise,	<i>ú-jurú,</i>	<i>chetuyu.</i>
Tapir,	<i>dama,</i>	<i>chama.</i>

The *Hypurinas* on the Rio Acre (or *Aquiri*) belong to the same tribe. They are said to be related to the *Chacobos* and the *Piros* of the *Ucayali*. They are without civilization. The women go naked, but the men wear long purple robes, and both sexes pierce the lips and nose. Some agriculture is carried on, but hunting and fishing are the main sources of the food supply.*

The total number of natives on the *Purus* and its affluents was estimated by Colonel Labre, in 1885, at 40,000, "speaking forty or more different languages;" but this last assertion we may take with large allowance. Probably not over four or five stocks are represented. The same explorer names nine tribes visited by him on the river *Ituxy*. They are the: 1, *Caccharari*; 2, *Canamary*; 3, *Catauxi*; 4, *Guarayo*;

* *Scottish Geographical Magazine*, 1890, p. 242.

5, Huatanary; 6, Hypurina; 7, Hyuma; 8, Pamana; and 9, Pamary tribes.*

In this list, as elsewhere, the term *Guarayos* has no ethnic significance. It is a Tupi word applied in this Spanish form to various wild, uncivilized tribes.

9. *The Bolivian Highlands: the Chiquitos, Yurucares, Mosetenas, Tacanas, Samucus, Canichanas and others.*

On the Atlantic face of the Cordillera, in the easternmost portion of Bolivia, where the head-waters of the Madeira are known by the names of the Mamore, the Guapai and the Beni, there is an astonishing variety of linguistic stocks. It would seem that the broken remnants of many diverse nations had sought refuge in the deep vales and dense forests of this region.

We have already seen that the Caribs were represented here by the Palmellas, and the Arawaks by the Moxos and Baures. South of the Moxos was the extensive region of the *Chiquitos*, stretching between south latitude 16° and 18°, and from the upper affluents of the Paraguay river to the summit of the Cordillera. On the south it adjoined the Gran Chaco, and on the west the territory of the Kechuas. They were a medium-sized, mild-mannered people, mostly of little culture, depending on the chase for food, but willingly adopting the agricultural life recommended to them by the missionaries. They were divided into a vast number of small roving bands, the most important group of which were

* *Proceedings of the Royal Geog. Society*, 1889, p. 501.

the Manaticas, whose homes were near Lake Xaray, about the head-waters of the Paraguay. Their myths relating to a male and female deity and their son reminded the Jesuits of the Christian Trinity.* The Manaticas were agriculturists and remarkably skilful potters. The villages they constructed were surrounded with palisades and divided by broad streets. The corpses of the dead were deposited in underground vaults, and both property and rank passed in the male line to the sons of the deceased.

The Chiquito language is interesting for its scope and flexibility, being chiefly made up of generic particles capable of indefinite combination.† It is singular in having no numerals, not even as far as three. Its four principal dialects were those of the Taos, the Piñocos, the Manaticas and the Penochies.‡ It was selected by the missionaries as the medium of instruction for a number of the neighboring tribes.

Of such tribes there were many, widely different in speech, manners and appearance from the Chiquitos. Some of them are particularly noteworthy for their un-Indian type. Thus, to the west of the Chiquitos, on the banks of the rivers Mamore and Chavari, were

* Muratori, *Il Cristianesimo Felice*, p. 27 (Venezia, 1743). Father Fernandez gives the names of 69 bands of the Manaticas (*Lettres Edifiantes et Curieuses*, Tom. II., p. 174).

† A grammar of it has been edited by MM. Adam and Henry, *Arte de la lengua Chiquita*, Paris, 1880. (*Bibliothèque Linguistique Américaine*, Tome VI.) The sub-divisions of the Chiquitos are so numerous that I refrain from encumbering my pages with them. See D'Orbigny, *L'Homme Américain*, Tom. II., p. 154, and authorities there quoted.

‡ Hervas, *Catalogo de las Lenguas Conocidas*, Tom. I., p. 159.

the Yurucares, the Tacanas and the Mosetenas, all neighbors, and though not of one tongue, yet alike in possessing a singularly white skin and fine features. Their color is as light and as really white as many southern Europeans, the face is oval, the nose straight, fine, and often aquiline, the lips thin, the cheek-bones not prominent, the eyes small, dark and horizontal, the expression free and noble. They are of pure blood, and the most important tribe of them derived their name, *Yurucares*, white men, from their Kechua neighbors before the conquest. They are usually uncommonly tall (1. 75), bold warriors, lovers of freedom and given to a hunting life. The women are often even taller and handsomer than the men.

The traveler D'Orbigny suggested that this light color arose from their residence under the shade of dense forests in a hot and humid atmosphere. He observed that many of them had large patches of albinism on their persons.*

The branches of these stocks may be classed as follows:

* Alcide D'Orbigny, *L'Homme Americain*, Vol. I., p. 356, sq. Among the D'Orbigny MSS. in the Bibliotheque Nationale, I found an inedited grammar and dictionary of the Yurucari language. It would be very desirable to have this published, as our present knowledge of the tongue rests on a few imperfect vocabularies. The work is doubtless that by P. la Cueva, mentioned in H. Ludwig, *Lit. of Amer. Aborig. Languages*, p. 206; but the author and editor of that work were in error in classing the Tacana and Maropa as members of the Yurucari stock. They belong to a different family.

YURUCARI LINGUISTIC STOCK.

<i>Conis.</i>	<i>Enetés.</i>	<i>Mansiños.</i>	<i>Solostos.</i>
<i>Cuchis.</i>	<i>Mages.</i>	<i>Oromos.</i>	

MOSETENA LINGUISTIC STOCK.

<i>Chimanis.</i>	<i>Maniquies.</i>	<i>Muchanis.</i>	<i>Tucupis.</i>
<i>Magdalenos.</i>			

The Toromonas occupy the tract between the Madre de Dios and the Madidi, from 12° to 13° south latitude. According to D'Orbigny they are, together with the Atenes, Cavinass, Tumupassas and Isuiamas, members of one stock, speaking dialects of the *Tacana* language. He was unable to procure a vocabulary of it, and only learned that it was exceedingly guttural and harsh.* From their position and their Kechua name (*tuyu*), low or swamp land, I am inclined to identify the Toromonas with the Tuyumiris or Pukapakaris, who are stated formerly to have dwelt on the Madre de Dios and east of the Rio Urubamba, and to have been driven thence by the Sirineris (Tschudi).

According to recent authorities the Cavinass speak the same tongue as the Araunas on the Madre de Dios, which are separated from the Pacaguaras by the small river Genichiquia;† and as the language of the Toromonas is called in the earlier accounts of the missions *Macarani*, I may make out the following list of the members of the

TACANA LINGUISTIC STOCK.

<i>Araunas.</i>	<i>Isuiamas.</i>	<i>Pukapakaris.</i>	<i>Tumupassas.</i>
<i>Atenes.</i>	<i>Lecos.</i>	<i>Sapiboconas.</i>	<i>Tuyumiris.</i>
<i>Cavinass.</i>	<i>Macaranis.</i>	<i>Tacanas.</i>	
<i>Equaris.</i>	<i>Maropas.</i>	<i>Toromonas.</i>	

* *L'Homme Americain*, Tom. I., p. 374.

† *Scottish Geographical Magazine*, 1890.

The Araunas are savage, and according to Heath "cannibals beyond a doubt." He describes them as "gaunt, ugly, and ill formed," wearing the hair long and going naked.* Colonel Labre, however, who visited several of their villages in 1885, found them sedentary and agricultural, with temples and idols, the latter being geometrical figures of polished wood and stone. Women were considered impure, were not allowed to know even the names of the gods, and were excluded from religious rites.† The Cavinás, on the other hand, are described by early writers as constructing houses of stone.‡ The Maropas, on the east side of the river Beni near the little town of Reyes, speak a dialect of Tacana as close to it as Portuguese to Spanish. They are erroneously classed as a distinct nation by D'Orbigny, who obtained only a few words of their tongue. The Sapiboncas, who lived at the Moxos Mission, and of whose dialect Hervas supplies a vocabulary, are also a near branch of the stock. We now have sufficient material to bring these tribes into relation. With them I locate the Lecos, the tribe who occupied the mission of Aten, and are therefore called also Atenianos.§ At present some civilized Lecos live at the mission of

* E. Heath, *Kansas City Review*, April, 1883. He gives vocabularies of Tacana and Maropa. A devotional work has been printed in Tacana.

† *Proceedings of the Royal Geographical Society*, 1889, p. 498.

‡ De Laet, quoted in *Mithridates*, Th. III., Ab. II., s. 577.

§ "En Aten se habla la Leca por ser este pueblo de Indios Lecos." *Descripción de las Misiones de Apolobamba* (Lima, 1771).

Guanay, between the Beni and Titicaca; but we have nothing of their language.*

The Tacana dialects present a number of verbal analogies to Kechua and Aymara; so many in fact that they testify to long inter-communion between the stocks, though I think not to a radical identity. I present a few:

	TACANA.	KECHUA.
Man,	<i>reanci,</i>	<i>runa.</i>
Water,	<i>jene,</i>	<i>una.</i>
Hand,	<i>ma,</i>	<i>maqui.</i>
Foot,	<i>quatri,</i>	<i>chaqui.</i>
House,	<i>etai,</i>	<i>uta (Aymara).</i>
Stone,	<i>tumu,</i>	<i>rumi.</i>
Star,	<i>emata,</i>	<i>matti.</i>
Lightning,	<i>ilapa,</i>	<i>illapa.</i>
Year,	<i>mara,</i>	<i>mara.</i>
Three,	<i>quimisha,</i>	<i>quimsa.</i>
Four,	<i>puschi,</i>	<i>pusi (Aymara).</i>
Five,	<i>pischica,</i>	<i>pichka.</i>

The numerals above "two" have clearly been borrowed from the Kechua-Aymara.

There are also a large number of verbal coincidences between the Tacana and the Pano groups, but not enough to allow us to suppose an original unity.

The *Samucus* (Zamucas) embraced a number of sub-tribes dwelling on the northern border of the Chaco, between 18° and 20° south latitude, and about the river Oxuquis. They did not resemble the Chaco stocks, as they were not vagrant hunters, but dwelt

* Weddell, *Voyage dans la Bolivie*, p. 453 (quoted by Waitz).

in fixed villages, and pursued an agricultural life.* Their language was singularly sweet in sound, and was called by D'Orbigny "the Italian of the forest." They included the following members:

SAMUCU LINGUISTIC STOCK.

<i>Careras.</i>	<i>Cuculados.</i>	<i>Morotocos.</i>	<i>Tapios.</i>
<i>Cayporotades.</i>	<i>Guaranocas.</i>	<i>Potureros.</i>	<i>Ugaronos.</i>
<i>Coroynos.</i>	<i>Ibirayas.</i>	<i>Satienos.</i>	

Among these the Morotocos are said to have offered the rare spectacle of a primitive gynocracy. The women ruled the tribe, and obliged the men to perform the drudgery of house-work. The latter were by no means weaklings, but tall and robust, and daring tiger-hunters. The married women refused to have more than two children, and did others come they were strangled.

On the river Mamore, between 13° and 14° of south latitude, were the numerous villages of the *Canichanas* or *Canisianas*. They were unusually dark in complexion and ugly of features; nor did this unprepossessing exterior belie their habits or temperament. They were morose, quarrelsome, tricky and brutal cannibals, preferring theft to agriculture, and prone to drunkenness; but ingenious and not deficient in warlike arts, constructing strong fortifications around their villages, from which they would sally forth to harass and plunder their peaceable

*Most of the Samucus were gathered at the mission of St. Ignatius. Father Chomé remarks, "Les Zamucos, Cuculados, Tapios et Ugaronos parlent à peu près la même langue." *Lettres Edifiantes*, Tome II., p. 191. See also D'Orbigny, *L'Homme Américain*, Tom. II., p. 142.

neighbors. By a singular anomaly, this unpromising tribe became willing converts to the teachings of the Jesuits, and of their own accord gathered into large villages in order to secure the presence of a missionary.* Their language has no known affinities. It is musical, with strong consonantal sounds, and like some of the northern tongues, makes a distinction between animate and inanimate objects, or those so considered.†

Between 13° and 14° of south latitude, on the west bank of the Rio Mamore, were the *Cayubabas* or *Cayuvavas*, speaking a language without known affinities, though containing words from a number of contiguous tongues.‡ The men are tall and robust, with regular features and a pleasant expression. The missionaries found no difficulty in bringing them into the fold, but they obstinately retained some of their curious ancient superstitions, as, for instance, that a man should do no kind of work while his wife had her monthly illness; and should she die, he would undertake no enterprise of importance so long as he remained a widower.§

Brief notices will suffice of the various other tribes, many of them now extinct, who centered around the missions of the Chiquitos and Moxos early in this century.

* D'Orbigny, *L'Homme Americain*, Tome II., p. 247.

† Professor E. Teza gives some texts in his *Saggi Inediti di Lingue Americane*, pp. 40, 41; and Mr. E. Heath has supplied a careful vocabulary of recent date (*Kansas City Review*, April, 1883).

‡ Texts of the Pater, Ave and Credo are given by E. Teza, *Saggi Inediti di Lingue Americane*, p. 51.

§ D'Orbigny, *L'Homme Americain*, Tome II., p. 257.

The *Apolistas* took their name from the river Apolo, an affluent of the Beni, about south latitude 15° . They were contiguous to the Aymaras, and had some physical resemblance to them. From their position, I suspect they belong in the Tacana group.

The *Chapacuras*, or more properly Tapacuras, were on the Rio Blanco or Baures in the province of Moxos. They called themselves *Huachis*, and the Quitemocas are mentioned as one of their sub-tribes. Von Martius thinks they were connected with the Guaches of Paraguay, a mixed tribe allied to the Guaycuru stock of the Chaco. The resemblance is very slight.

The *Covarecas* were a small band at the mission of Santa Anna, about south latitude 17° . Their language was practically extinct in 1831.

The *Curaves* and the *Curuminacas*, the former on the Rio Tucubaca and the latter north of them near the Brazil line, were said to have independent languages; but both were extinct at the time of D'Orbigny's visit in 1831. The same was true of the *Corabecas* and *Curucanecas*.

The *Ites* or Itenes were upon the river Iten, an affluent of the Mamore about 12° south latitude. They were sometimes improperly called Guarayos, a term which, like Guaycurus, Aucas, Yumbos and others, was frequently applied in a generic sense by the Spanish Americans to any native tribe who continued to live in a savage condition.

The *Movimas* (Mobimas) occupied the shores of the Rio Yacuma, and Rio Mamore about 14° south latitude. In character and appearance they were similar to the Moxos, but of finer physique, "seldom ever

under six feet," says Mr. Heath. They are now civilized, and very cleanly in their habits. The vocabularies of their language show but faint resemblances with any other.

The *Otuquis*, who in 1831 did not number over 150 persons, lived in the north-east part of the province of Chiquitos near the Brazilian line. Their language was nearly extinct at that time. The short vocabulary of it preserved by D'Orbigny does not disclose connections with other stocks, unless it be a distant affinity with the Tacana group. This may be illustrated by the following words:

	OTUQUI.	TACANA DIALECTS.
Man,	<i>vuani</i> ,	<i>reanci</i> .
Woman,	<i>vuaneti</i> ,	<i>anu</i> .
Sun,	<i>neri</i> ,	<i>ireti</i> .
Moon,	<i>ari</i> ,	<i>bari</i> .
Water,	<i>uru</i> ,	<i>yuvi</i> .
Head,	<i>ikita</i> o,	<i>ekuya</i> .

It was the policy of the Jesuits in their missions in this district to gather the tribes from the forest and mountain into permanent settlements, and reduce as far as possible the number of languages and dialects, so as to facilitate instruction in religious teaching. Shortly after this Order was expelled from their missions (1767), an official report on their "reductions" was printed in Peru, giving a list of the tribes at each station, and the languages in use for instruction.*

* *Descripcion de las Misiones del Alto Peru*, 12 mo., Lima, 1771. The only copy of this work which I have seen, and that an imperfect one, is in the Collection Angrand, in the Bibliotheque Nationale, Paris. Among the MSS. of this great library is a *Confession-*

From this scarce work I extract a few interesting particulars.

The province of Apolobamba is described as extending about eighty leagues northeast-southwest, east of the Cordillera, and west of the Rio Beni. The languages adopted in it were the Leca, spoken by the Lecos Indians at the mission of Aten, and the Maracani, at the mission of Tumupasa, on the Rio Beni. Forty-nine nations are named as belonging to the mission of the Chiquitos, each of whom is stated to have spoken a different language or dialect, though all were instructed in their religious duties in Chiquito. At the mission of Moxos twenty-nine tribes are named as in attendance, but it had not been found possible, such was the difference of their speech, to manage with less than nine languages, to wit, the Moxa, the Baure, the Mure, the Mobima, the Ocorona, the Cayubaba, the Itonama and the Maracani.*

Of these tongues I have classed the Leca and Maracani as dialects of the Tacana, not from comparison of vocabularies, for I have seen none of either, but from the locations of the tribes speaking them. The Moxa and Baure are dialects of the Arawak stock. The Mura is a branch of the Tupi, spoken by the powerful tribe of the Muras on the Madeira and Ama-

ario in Itonama, which should be published as perhaps the only text of the language extant. Some remarks on its phonetics may be found in D'Orbigny, *L'Homme Americain*, Tome II., p. 239.

* According to Father Fernandez there were, in 1726, 30,000 converts under the care of the Moxos Mission, and fifteen different languages were spoken, "qui ne se ressembloit nullement." *Lettres Edifiantes*, Tom. II., p. 161.

zon, who distinctly recalled in tradition their ancestral home in the west.* The Chiquito, the Mobima, the Caniciana (Canichana), the Cayubaba, the Itonama and the Ocorona remain so far irreducible stocks. Vocabularies of the first five have been preserved, but nothing of the Ocorona. It is probably identical with the Rocorona, in which Professor Teza has published some texts.† I have not been able to identify it with any other tongue. Hervas unites both with the Herisebocona as a single stock.‡

2. THE PAMPEAN REGION.

South of the dividing upland which separates the waters of the Amazon from those which find their way to the Rio de la Plata, the continent extends in broad level tracts, watered by numerous navigable streams and rich in game and fish. Its chief physical features are the wooded and rolling Chaco in the north, the treeless and grassy Pampas to the south, and the sterile rocky plains of Patagonia still further toward the region of cold. In the west the chain of the Cordilleras continues to lift its summits to an inaccessible height until they enter Patagonia, when they gradually diminish to a range of hills.

The tribes of all this territory, both east and west

* See von Martius, *Ethnographie und Sprachenkunde*, Bd. I.; s. 412. Professor Teza gives the Pater, Ave and Credo in the Mura dialect of Bolivia (*Saggi inediti di Lingue Americane*, p. 43).

† A Pater, an Ave and a Credo. *Saggi inediti di Lingue Americane*, pp. 48, 49. The author of the *Descripcion*, however, distinguishes between the *Ocoronos* and the *Rotoroños*, both at the Moxos Mission.

‡ See *Mithridates*, Th. II., s. 577.

of the Andes, belong ethnographically together, and not with the Peruvian stocks. What affinities they present to others to the north are with those of the Amazonian regions.

1. *The Gran Chaco and its Stocks.* *The Guaycurus, Lules, Matacos and Payaguas. The Charruas, Guatos, Calchaquis, etc.*

The great streams of the Parana and Paraguay offer a natural boundary between the mountainous country of southern Brazil and the vast plains of the Pampas formation. In their upper course these rivers form extensive marshes, which in the wet season are transformed into lakes on which tangled masses of reeds and brushwood, knitted together by a lush growth of vines, swim in the lazy currents as floating islands. These were the homes of some wild tribes who there found a secure refuge, the principal of whom were the Caracaras, who came from the lower Parana, and were one of the southernmost offshoots of the Tupi family.*

For five hundred miles west of the Parana and extending nearly as far from north to south, is a wide, rolling country, well watered, and usually covered with dense forests, called El Gran Chaco.† Three noble rivers, the Pilcomayo, the Vermejo and the Salado, intersect it in almost parallel courses from north-west to south-east.

* The Capesacos and Menepes were others. Nicolas del Techo, *Historia Provinciæ Paraquariæ*, Lib. XII., cap. 33.

† The word *chaco*, properly *chacu*, in Kechua is applied to game driven into pens. Lozano says it was used metaphorically in reference to the numerous tribes driven from their homes into the forests (*Descrip. Chorograph. del Gran Chaco*, p. 1).

Abounding in fish and game and with a mild climate, the Chaco has always been densely peopled, and even to-day its native population is estimated at over twenty thousand. But the ethnology of these numerous tribes is most obscure. The Jesuit missionaries asserted that they found eight totally different languages on the Rio Vermejo alone,* and the names of the tribes run up into the hundreds.

As is generally the case with such statements, distant dialects of the same stock were doubtless mistaken for radically distinct tongues. From all the material which is accessible, I do not think that the Chaco tribes number more than five stocks, even including those who spoke idioms related to the Guarani or Tupi. The remainder are the Guaycuru, the Mataco, the Lule and the Payagua. This conclusion is identical with that reached by the Argentine writer, Don Luis J. Fontana, except that he considers the Chunipi independent, while I consider that it is a member of the Mataco stock.

One of the best known members of the *Guaycuru* stock was the tribe of the Abipones, whose manners and customs were rendered familiar in the last century through the genial work of the Styrian missionary, Martin Dobrizhoffer.† They were an equestrian people, proud of their horsemanship and their herds, and at that time dwelt on the Paraguay river, but by tradition had migrated from the north.

The Guaycurus proper were divided into three

* Del Techo, *ubi supra*, Lib. I., cap. 41.

† *Historia de Abiponibus*, Vienna, 1784. An English translation, London, 1822.

gentes (*parcialidades*) located with reference to the cardinal points. On the north were the Epicua-yiqui; on the west the Napin-yiqui, and on the south the Taqui-yiqui. Their original home was on the Rio Paraguay, two hundred leagues from its mouth, but later they removed to the banks of the Pilcomayo. Their system was patriarchal, the sons inheriting direct from the father, and they were divided into hereditary castes, from which it was difficult to emerge. These were distinguished by different colors employed in painting the skin. The highest caste, the *nabbidigan*, were distinguished by black.*

The Abipones were almost entirely destroyed early in this century by the Tobas and Mbocobis,† and probably at present they are quite extinct. The Tobas are now the most numerous tribe in the Chaco, and their language the most extended.‡ They remain savage and untamable, and it was to their ferocity that Dr. Crévaux, the eminent French geographer and anthropologist, fell a victim in recent years. The dialects of the Abipones, Mbocobis and Tobas were "as much alike as Spanish and Portuguese" (Dobrizhoffer).

The Guachis speak a rather remote dialect of the stock, but undoubtedly connected with the main

* Pedro Lozano, *Descripcion del Gran Chaco*, pp. 62-65.

† "C'est à peine s'il en reste aujourd'hui trois ou quatre individus." D'Orbigny MS. in the Bibliotheque Nationale. This was written about 1834.

‡ A. J. Carranza, *Expedicion al Chaco Austral*, p. 422 (Buenos Aires, 1884). This author gives a useful vocabulary of the Toba, together with a number of familiar phrases.

stem. According to the analogy of many of their words and the tenor of tradition, they at one time lived in the Bolivian highlands, in the vicinity of the Moxos and Chiquitos. It is probable that they are now nearly extinct, as for several generations infanticide has been much in vogue among them, prompted, it is said, by superstitious motives. Forty years ago an inconspicuous remnant of them were seen by Castelnau and Natterer in the vicinity of Miranda.*

The Malbalas, who were a sub-tribe of the Mbo-cobis, dwelling on the Rio Vermejo, are described as light in color, with symmetrical figures and of kindly and faithful disposition. Like most of the Chaco tribes, they were monogamous, and true to their wives.†

The Terenos and the Cadioéos still survive on the upper Paraguay, and are in a comparatively civilized condition. The latter manufacture a pottery of unusually excellent quality.‡

On the authority of Father Lozano I include in this stock the Chichas-Orejones, the Churumatas, that branch of the Mataguayos called Mataguayos Churumatas (from the frequent repetition of the syllable *chu* in their dialect), the Mbocobies and Yapi-talaguas, whose tongues were all closely related to

* A comparison of their tongue is instituted by Martius, *Ethnographie und Sprachenkunde*, Bd. II., s. 131. See also *Ibid.*, Bd. I., s. 244.

† Lozano, *Descripcion Chorographica del Gran Chaco*, p. 83.

‡ Richard Rohde, in *Orig. Mitt. Eth. Abth. Königl. Mus.*, 1885, s. 13. Von Martius identified the Cadioéos with the Cadigues of the Payaguas, which is open to doubt (*Ethnographie*, Bd. I., 226).

the Toba;* while Dr. Joao Severiano da Fonseca has recently shown that the Quinquinaux is also a branch of this stock.†

The *Lules* are a nation which has been a puzzle for students of the ethnography of the Chaco. They were partly converted by the celebrated Jesuit missionary and eminent linguist, Father Alonso de Barcena, in 1690, who wrote a grammar of their language, which he called the Tonicote. The Jesuit historian of Paraguay, Del Techo, states that three languages were spoken among them, the Tonicote, the Kechua and the Cacana, which last is a Kechua term from *caca*, mountain, and in this connection means the dialect of the mountaineers. Barcena's converts soon became discontented and fled to the forests, where they disappeared for thirty years or more. About 1730, a number of them reappeared near the Jesuit mission of the Chaco, and settled several towns on the rivers Valbuena and Salado. There their language was studied by the missionaries. A grammar of it was composed by Machoni,‡ and a vocabulary collected by the Abbé Ferragut.§ Meanwhile the work of Barcena had disappeared, and the Abbé Hervas expressed a doubt whether the Lule of Machoni was the same as that of his predecessor.

* *Descripción del Gran Chaco*, pp. 73, 76, 77.

† *Compte-Rendu du Cong. Internat. des Américanistes*, 1888, p. 510, quoted by M. Lucien Adam.

‡ *Arte y Vocabulario de la Lengua Lule y Tonicote* (Madrid, 1732).

§ Printed in Gilii, *Saggio di Storia Americana*, Tom. III., p. 363.

He advanced the opinion that the ancient Lule was the Cacana; that the modern were not the descendants of the ancient Lules, and that the Mataras of the Chaco were the Tonicotes to whom Barcena was apostle.*

The missionary Lozano to some extent clears up this difficulty. He states that the Lules or Tonicotes were divided into the greater and lesser Lules, and it is only the latter to which the name properly belonged. The former were divided into three bands, the Isistines, the Oristines, and the Toquistines.† None of these latter existed under these names at the close of the last century, and at present no tribe speaking the Lule of Machoni is known in the Chaco. The language has evident affinities both with the Vilela and the Mataco,‡ but also presents many independent elements. The statement of Hervas, copied by various subsequent writers,§ that the ancient or greater Lules spoke the Cacana, and that this was a different stock from the Lule of Machoni, lacks proof, as we have no specimen of the Cacana, and not even indirect knowledge of its character. Indeed, Del Techo says definitely that the missionaries of the earliest period, who were familiar with the Lule of that time, had to employ interpreters in ministering to the Cacasas.||

* *Catalogo de las Lenguas Conocidas*, Tom. I., pp. 165-173.

† Pedro Lozano, *Descripcion Chorographica del Gran Chaco*, pp. 94-97 (Cordoba, 1733).

‡ As shown by Adelung, *Mithridates*, Bd. II., s. 508.

§ S. A. L. Quevede has undertaken to show that the real Lule were the hill tribes of the Anconquija range, and their tongue the Cacana (*American Anthropologist*, 1890, p. 64).

|| Del Techo, *Historia Provinciæ Paraquariæ*, Lib. II., cap. 20.

The modern Vilelas live on the Rio Salado, between 25° and 26° south latitude. I find in it so many words of such character that I am inclined to take it as the modern representative of the Lule of Machoni, though corrupted by much borrowing. When we have a grammar of it, the obscurity will be cleared up.

	LULE.	VILELA.
Tongue,	<i>lequy,</i>	<i>lequip.</i>
Tooth,	<i>llu,</i>	<i>lupe.</i>
Hand,	<i>ys,</i>	<i>ysip.</i>
House,	<i>enú,</i>	<i>quané.</i>

A comparison of the Vilela with the Chunipi, (Chumipy, Sinipi or Ciulipi,) proves that they are rather closely related, and that the Chunipi is not an independent tongue as has often been stated. In view of this, I include it in the Lule dialects.

The third important stock is that of the *Matacos*. It is still in extensive use on the Rio Vermejo, and we have a recent and genial description of these people and their language from the pen of the Italian traveller, Giovanni Pelleschi.* They are somewhat small in size, differing from the Guaycurus in this respect, who are tall. Their homes are low huts made of bushes, but they are possessed of many small arts, are industrious, and soon become conversant with the use of tools. Their hair is occasionally wavy, and in children under twelve, it is often reddish. The eyes are slightly oblique, the nose large, straight and low. Like all the Chaco Indians, they do not care for agriculture, preferring a subsist-

* *Otto Mesi nel Gran Ciacco* (Firenze, 1881).

ence from hunting and fishing, and from the product of their horses and cattle. What few traditions they have indicate a migration from the east.

The term Mataguayos was applied to some of this stock as well as to some of the Guaycurus. The former included the Agoyas, the Inimacas or Inacos, and the Palomos, to whom the Jesuit Joseph Araoz went as missionary, and composed a grammar and dictionary of their dialect. He describes them as exceedingly barbarous and intractable.* The Tayunis had at one time 188 towns, and the Teutas 46 towns. This was in the palmy days of the Jesuit reductions.† Both these extensive tribes are classed by D'Orbigny with the Matacos.

According to the older writers the *Payaguas* lived on the river Paraguay, and spoke their tongue in two dialects, the Payagua and the Sarigue. Von Martius, however, denies there ever was such a distinct people. The word *payagua*, he remarks, was a generic term for "enemies," and was applied indiscriminately to roving hordes of Guaycurus, Mbayas, etc.‡

The Payaguas, however, are mentioned distinctly by the early missionaries as a nation with peculiar language and habits. They differed from their neighbors as being aquatic, not equestrian. They were singularly skillful boatmen and had a mythology apart from the other tribes, "worshipping the devil under the figure of a great bird."§ There is also a

* "Nacion la mas vil del Chaco." Hervas, *Catalogo de las Lenguas Conocidas*, Tom. I., p. 164.

† Lozano, *Descripcion del Gran Chaco*, pp. 75, 76.

‡ *Ethnographie und Sprachenkunde*, Bd. I., s. 225-6.

§ *Lettres Edifiantes et Curieuses*, Tome II., pp. 96, 97.

manuscript in the Library of the American Philosophical Society, written in the middle of the last century, describing the visit of a missionary to the Payaguas, at that time resident near Santa Fe in Paraguay. He accuses them as given to revolting vices and utterly barbarous.*

The statement of Von Martius that the nation has entirely disappeared is incorrect, as quite recently a vocabulary of it has been obtained by Don Luis de Fontaña, which shows it to be distinct both from the Guaycuru and any other known stock.†

LINGUISTIC STOCKS OF THE GRAN CHACO.

Guaycuru Stock:

Abipones, in the central Chaco.

Aguilotes, sub-tribe of the Mbocobis.

Bocobis, see *Mbocobis*.

Cadioëos, near Fort Olimpo on the Paraguay.

Chichas Orejones.

Churumatas.

Guachis, on Rio Mondego.

Guaycurus, on the middle Paraguay.

Malbalais, on the Rio Vermejo.

Matagayos-Churumatas.

Mbayas, on Rio Xerui.

Mbocobis, on the Rio Vermejo.

Pitilagás, see *Yapitilagás*.

Quinquinaux, northeast of Albuquerque.

Tobas, north of the Mbocobis.

Terenos, on the Rio de Miranda.

Yapitalagás, on the Rio Vermejo.

* *Viage del P. F. Pedro Parras desde Aragon à Indias en 1748*, MS.

† Printed in the *Revista de la Sociedad Geografica Argentina*, 1887, p. 352. I have compared this with the Payagua text given in the *Mithridates*, Bd. III., 490, but the latter is so obscure that I derived no data for a decision as to the identity of the dialects.

*Lule Stock:**Chunipis*, on Rio Vermejo.*Juris*, on Rio Salado.*Lules*, near Rio Vermejo.*Mataras*, on Rio Pilcomayo.*Oristines*, on Rio Pilcomayo.*Sinipis*, see *Chunipis*.*Tonocotes*, on Rio Pilcomayo.*Toquistines*, on Rio Pilcomayo.*Vilelas*, north of the Rio Vermejo.*Ysistines*, on the Pilcomayo.*Mataco Stock:**Agoyas*, on Rio Vermejo.*Atalalas*, on Rio Vermejo.*Enimagas* or *Imacos*, on east bank of Pilcomayo.*Malacos*, on Rio Verde.*Mataguayos*, north of Rio Vermejo.*Ocoles*, south of Rio Vermejo.*Palomos*, on Rio Vermejo.*Taunies*, on Rio Vermejo.*Teutas*, on Rio Vermejo.*Vejosos*, on Rio Vermejo.*Xolotes*, on Rio Vermejo.*Yoes*, on Rio Vermejo.*Payagua Stock:**Agaces*, on Rio Paraguay.*Payaguas*, near Santa Fé.*Sarigues*, on middle Paraguay.

Among the independent Chaco stocks, D'Orbigny classes the *Lenguas*, who in 1828 lived, about 300 in number, near Corrientes.* Von Martius believed they were a branch of the Guaycurus.† There is ample evidence, however, that they were a wandering branch of the Chiquitos of Bolivia. The mis-

* *L'Homme Americain*, Tom. II., p. 116.

† *Ethnographie und Sprachenkunde*, Bd. I., 226.

sionary, J. P. Fernandez, who visited them about a century before D'Orbigny, says expressly that they spoke the same tongue as the Chiquitos;* and the statement of Hervas that the similarities of their words to the Chiquito arose from borrowed expressions is not well founded.†

The *Charruas* were a barbarous nation living in the extensive plains which stretch from the banks of the Parana to the sea coast. They were savage and courageous, without fixed homes, and skilled in the use of the bola. One of their customs was to cut off a joint of a finger on the death of a relative, and there were few of the adults that were not thus maimed.‡ In appearance they were usually large in size, heavily built, with big heads and broad faces, narrow noses, small eyes and large mouths. Their color was dark.§

The members of this family as recorded by the early writers, especially Hervas, are as follows:

CHARRUA LINGUISTIC STOCK.

Bohanes, on the Paraguay near the Rio Negro (extinct).

Chanes, adjacent to the Bohanes.

Charruas, on the coast east of the Rio Uruguay.

Guenoas, east of the Uruguay.

Martidanes, east of the Uruguay.

Minuanes, between the Uruguay and Parana.

Yaros, on east bank of Uruguay (extinct).

Dr. Paul Ehrenreich describes them as they are to-

* *Lettres Edifiantes et Curieuses*, Tome II., p. 165.

† *Catalogo de las Lenguas*, Tom. I., p. 185.

‡ Pedro Lozano, *Historia de la Conquista de Paraguay*, Tom. I., p. 407 (Ed. Buenos Aires, 1873).

§ D'Orbigny, *L'Homme Americain*, Tom. II., p. 83.

day, splendid riders and daring soldiers, but faithless and tricky*; so they have not much improved since Father Chomé in 1730 stigmatized them as *francs voleurs de grand chemin*.†

The *Guatos* or *Vuatos* were accolents of the upper Paraguay and Araguay, and had fixed settlements near Albuquerque. Travelers report them as an unusually handsome people. They are well-built, light in hue, with Roman noses and regular features, and the men with a well-developed beard on lip and chin. This appearance does not belie their intelligence, which is above the average. Polygamy prevails to an uncommon extent. Von Martius thought that they were of a northeastern origin, connected perhaps with the Malalis of Bahia, who are a Tapuya people.‡ There may have been some admixture, as from a small vocabulary I quote the following resemblances:

	GUATO.	TAPUYA.
Water,	<i>magen</i> ,	<i>magnan</i> .
Head,	<i>döken</i> ,	<i>dicran</i> .
Hand,	<i>ida</i> ,	<i>danicra</i> .
Foot,	<i>apoo</i> ,	<i>po, ipaa</i> .
Tooth,	<i>maqua</i> ,	<i>aigua</i> .
Tongue,	<i>chagi</i> ,	<i>dagento</i> .

A recent writer does not give so favorable an opinion of this people. He found them living about the junction of the Rio San Lorenzo with the Rio Para-

* *Zeitschrift für Ethnologie*, 1889, s. 658.

† *Lettres Edifiantes et Curieuses*, Tome II., p. 107.

‡ *Ethnographie und Sprachenkunde*, Bd. I., s. 245, 246. A good vocabulary is supplied by Castelnau, *Expedition*, Tome V., Appendix.

guay, and in a depraved condition. Girls who were not more than five or six years old were used by the men as wives. Sterility and premature decrepitude were the natural consequences.*

On the western border of the Chaco, in the provinces of Tucuman and Catamarca, resided the *Calchaquis*, a tribe interesting as the only one in the South Atlantic Group who constructed walls of cut stone. At least, such are found in their country, as for instance, one about thirty miles from Andalgala, where there is a well-constructed dry wall about ten feet high, enclosing a space nearly a mile in diameter, evidently once a walled city. Stone built tombs are also frequent, from which the rifler is rewarded with mummies, ornaments of impure gold, and small idols of copper. But I doubt if the Calchaquis developed any such ripe arts as these. History tells us that they voluntarily accepted the rule of the Incas about the middle of the fifteenth century, and that their land became part of the *Collasuyu* or southern district of the empire. All these remains have a distinct impress of Kechua art, and we may be sure that their inspiration was throughout Peruvian.†

The earliest missionaries depict the Calchaquis with curious usages and with a certain barbaric splendor. A widow became the wife of her husband's brother, as of old in Israel. So long as she was a virgin, a girl could dress in the gaudiest colors, but

* Richard Rohde, in the *Orig. Mittheil. der Ethnol. Abtheil d. Mus. zu Berlin*, 1885, s. 15.

† On the ruins of their fortresses and tombs, see Vincente G. Quesada, *Estudios Historicos*, pp. 45-48 (Buenos Aires, 1864).

once *prostrato pudore*, as the monk delicately puts it, she must change to sober weeds. Their ornaments were of silver and copper, and the nobles wore a circlet of gold and brilliant feathers. Their seasons of mourning were accompanied with the most violent orgies. Over the dead they raised heaps of stones, and held that the souls became stars.*

We have no specimen of the language of the Calchaquis, although a grammar of it was written by the Jesuit, Alonso de Barcena, and perhaps published. It is called the Katamareño or Cacana tongue, terms derived from the Kechua. The proper names, however, which have been preserved in it indicate that it was different from the Kechua.† I have already referred (page 227) to Von Tschudi's suggestion that it survives in the modern Atacameño.

From the few specimens of skulls which have been examined, the Calchaquis appear allied to the Aucanian stock,‡ and it may be that further research will prove them a branch of the Araucanians.

The following tribes are mentioned by old writers as members of the

CATAMAREÑA LINGUISTIC STOCK.

<i>Acalianes.</i>	<i>Catamarcas.</i>	<i>Tamanos.</i>
<i>Cacas or Cacasas.</i>	<i>Diagitas or Drachitas.</i>	
<i>Calchaquis.</i>	<i>Quilmes.</i>	

* Nicolas del Techo, *Hist. Prov. Paraquariæ*, Lib. V., cap. 23.

† See Von Tschudi, in *Verhand. der Berlin. Anthropol. Gesell.*, 1885, s. 184, sqq. This traveler could find no relics of the tongue in the ancient Calchaqui district, which he visited in 1858. The only languages then were Spanish and Kechua (*Reisen*, Bd. V., s. 84).

‡ Virchow, in *Verhand. der Berliner Anthropol. Gesell.*, 1884, s. 375.

The learned Barcena also prepared a grammar of the Natixana or Mogana language, spoken by the *Naticas*, whom we find mentioned by later authorities as neighbors of the Calchaquis in the government of Santa Fé.* They apparently belonged among the Chaco tribes. Barcena adds that nine different tongues were spoken in the district of Cordova, among which were the Sanavirona and Indama, which had not been learned by the missionaries.†

2. *The Pampeans and Araucanians.*

South of the Gran Chaco, say from south latitude 35°, begins the true Pampas formation. This, according to the geologist Burmeister, is not a marine deposit, but the result of fluvial overflows and dust storms. It is diluvial and quaternary, and overlies the Patagonian formation, which is marine and early Pleistocene. The pampas are in parts wide grassy plains, like the prairies of the upper Mississippi valley; in parts they are salt deserts, in parts more or less wooded. With little variety, this scenery reaches from the Chaco to the Rio Negro, S. lat. 40°. Nearly the whole of this territory was occupied by one linguistic stock. It is the same which is found in Chili, where its most prominent members are the Araucanians.

Which was the course of migration, whether from the Pacific coast to the Pampean plains or the reverse, is not positively decided, but I am inclined to believe

* D'Orbigny, *L'Homme Américain*, Vol. II., p. 11.

† Barcena's report is published in the *Relaciones Geograficas de Indias*, Peru, Tom. II.

it was the latter. The ancestors of the Araucanians would not willingly have crossed the barren wastes of the desert of Atacama; there are evidences of a different people inhabiting Chili before they possessed it, and we have traces that they had not obtained full possession of that country at its discovery. This view does not deny subsequent migrations of the Araucanians into the Pampas under the pressure of the Spanish invasion.* In such moving they were simply returning to the traditional homes of their ancestors. As the name of the whole stock, I adopt the word Aucanian, from the Araucanian verb *aucani*, to be wild, indomitable, from which are derived the tribal names Aucanos and Aucas, occurring on both sides of the Andes.†

The Pampeans are principally nomadic hordes wandering from pasture to pasture with their horses, cattle and sheep. Their transitory encampments, called *tolderias*, are pitched by the side of some pond or stream. There their low tents made of dried horse skins are grouped confusedly, one to each family. Their food is chiefly horse flesh and mutton, often eaten raw. They raise no vegetables, and dislike agriculture. They carry on, however, many small industries, tan and dye leather, which they work up

* Dr. Darapsky remarks that the Araucanians first crossed the Andes into the Pampas about 300 years ago (*La Lengua Araucana*, p. 4, Santiago de Chile, 1888). This is true, but the tribes they found there were members of their own stock.

† Some have derived these names from the Kechua, *aucca*, enemy; but I am convinced by the examples of Federico Barbara, *Manuel de la Lengua Pampa*, p. 6 (Buenos Aires, 1879), that at any rate the same root belongs to the Araucanian.

into boots and horse furniture, and forge with skill iron heads for their long lances, and knives for the chase, while the women trim the ostrich skins into rugs, and weave wool into blankets and ponchos, highly prized for their serviceable qualities.* These products are bought up by the merchants in the cities, and thus the tribe is supplied with what it most prizes from European markets.

These roving hordes have no particular names. They are referred to as the northern, eastern or western peoples by the Aucanian terms having these significations, Puelches, Moluches, Huilliches. Besides these, there are the Ranqueles on the Rio Quinto, directly west of Buenos Ayres, who are said to have immigrated from Chili,† and the Querandies, now probably extinct, who once dwelt near that city.

Those living on the eastern slopes of the Andes, about the city of Mendoza, and in the ancient province of Cuyo, are described as taller and stronger than the Araucanians of Chili, and as claiming descent from the Pampean tribes.‡ They were locally known as Guarpes, and spoke dialects called the Allentiac and the Milcocayac, not distant from the Pampean proper, concerning which some grammatical description has been preserved.§

* Dr. Martin de Moussy gives an interesting sketch of these people in the *Annuaire du Comité d'Archæologie Americaine*, 1865, p. 218, sq.

† The chief source of information on this tribe is Col. Lucio de Mansilla, *Una Escursion á los Indios Ranqueles*, Vol. II. (Buenos Aires, 1870). The name Ranqueles means "thistle people," from the abundance of that plant in their country.

‡ G. Coleti, *Dizionario dell' America Meridionale*, s. v., Cuyo.

§ Valdivia, *Arte de la Lengua Chilena*. Ed. Lima, 1607.

Few of the Pampean tribes have been induced to accept civilization or Christianity. They still believe in their good spirit, *Chachoa*, and in one of evil or misfortune, *Gualicho*; they continue to obey their priests or medicine men; and the resting places of the dead are regarded with superstitious awe. Marriage among them, while it has the appearance of violence, is really carried out with the consent of the girl and her parents, for a sum agreed upon.

The Molu-Che or Manzaneros are said to be the best of the Pampeans. They are sedentary and have extensive orchards of apples and flocks of sheep to the north of the Rio Limay. They have well-cut features, fresh light complexion, black fine hair, and their women are considered really handsome.*

The Araucanians of Chili, known as singularly bold warriors who defied successfully the Incas, and gave the Spaniards the greatest trouble, occupy the Pacific coast from south latitude 25° to about 43°, and number about 20,000. In physical appearance they resemble the Pampeans, and present marked differences from both the Kechuas of Peru and the Tapuyas of Brazil, having high, brachycephalic skulls,† and a clear copper color of skin. They are of moderate stature, but muscular, with black hair, round faces, small eyes, and small feet and hands. They are divided locally into northern and southern tribes, but

* Lt. Musters, "On the Races of Patagonia," in *Journal of the Anthropological Institute*, Vol. I., p. 205.

† Paolo Riccardi, in *Memorie della Soc. Etnograf. di Firenze*, 1879, p. 139; also the estimable work of Jose T. Medina, *Los Aborijenes de Chile* (Santiago, 1882).

there is little difference in dialects. Their tongue, the *Chilidungu*, has been extravagantly lauded by some who have studied it, and one worthy missionary was so enamored with it, that he published a grammar and dictionary of it in Europe, that it might be introduced as the learned language there, to supersede the Latin*: it certainly is harmonious and flexible.

The Araucanians did not at any time rise in culture above the level of the Iroquois and Algonquins in the northern continent. It is true that in the tombs in their country we discover fine specimens of pottery, some good work in bronze, gold, copper and silver, and beautiful specimens of polished stone implements.† But if one examines closely the art-forms of these relics, he can not fail to recognize in them the potent inspiration of the Inca civilization; and we may be sure that if they were not directly booty from that nation, they were the products of its trained workmen, and are not to be put to the credit of Aucanian industry.

AUCANIAN LINGUISTIC STOCK.

Araucanos, in northern and central Chili.

Aucanos or *Aucas*, in the central Pampas.

Chauques, in the archipelago of Chiloe.

Chonos, (?) on Pacific, south of Chiloe.

Cuncos, in Chili, south of Rio Valdivia.

Divie-ches, on Rio Colorado.

Guarpes, near Mendoza.

Huiliches (southern people), tribes to the south.

* Bernard Havestadt, *Chilidugu, sive Res Chilenses* (Westphalia, 1777. Reprint by Julius Platzmann, Leipzig, 1883).

† Many of these are portrayed in the work of Medina, *Los Aborígenes de Chile*, above referred to.

Molu-ches (western people or warriors), on Pacific coast.

Pehuen-ches (pine-forest people), east of Cordillera, north of Rio Colorado.

Picun-ches (northern people), north of Pehuenches.

Puel-ches (eastern people), on both banks of Rio Negro.

Querandies, near site of Buenos Ayres.

Ranqueles, between Rio Quarto and Rio Quinto.

The Pacific coast of Patagonia, gashed by ancient glaciers into deep fiords and rocky islands, harbors various tribes whose affinities are uncertain. The most curious of them would seem to be the *Chonos* or *Chunos*, or *Cuncones*. They lived south of the archipelago of Chiloe, and are described as having red hair, a light olive complexion, and of mild and friendly manners. They raised a breed of dogs (perhaps *guanacos*), and wove their clothing from its coarse long hair.

This account comes to us from as far back as 1619, when the first missionaries visited them,* and these traits cannot therefore be attributed to intermixture with Europeans. They are not peculiar in these respects. Similar traits are reported of the *Boroas*, a tribe in one of the valleys of central Chili;† and I have already referred to the red hair of the boys among the *Matacos* of the Gran Chaco. Perhaps it was not unusual among these nations, as I can in no other way explain the strange idea of the poet Ercilla,

* Nicolas del Techo, *Historia Provinciæ Paraquariæ*, Lib. VI., Cap. IX.

† The *Boroas* live on the Tolten river, and have blue eyes, a fair complexion, and aquiline noses. Pablo Treuter, *La Provincia de Valdivia y los Araucanos*, p. 52, note (Santiago de Chile, 1861). E. Poeppig, *Reise in Chili und Peru*, Bd. I., s. 463 (Leipzig, 1836).

the Homer of the Araucanian Conquest, that these people were descendants of the Frisians of North Holland!*

The language of the Chonos is said to be quite different from that of the Araucanians. Poeppig believed it to be a distant dialect of the same stock. Some recent travelers assert that they are now extinct, but Dr. C. Martin informs us that the original inhabitants of the Chonos Islands, who were the "Huaihuenes" Indians, were transported in 1765 to the island of Chaulañec, where their posterity still survive.†

3. *The Patagonians and Fuegians.*

The Patagonians call themselves Chonek or Tzoneca, or Inaken (men, people), and by their Pampean neighbors are referred to as Tehuel-Che, southerners. They do not, however, belong to the Aucanian stock, nor do they resemble the Pampeans physically. They are celebrated for their stature, many of them reaching from six to six feet four inches in height, and

* "Mi nombre es Glaura, en fuerte hora pacida,
Hija del buen cacique Quilacura,
De la sangre de Frisio esclarecida."

Alonso de Ercilla, *La Araucana*, Canto XXVIII.

Faulkner and others refer to these as the *Cessares* (*Description of Patagonia*, p. 113, Hereford, 1774). There was such a tribe, and it was made the subject of a Utopian sketch, *An Account of the Cessares*, London, 1764.

† See Petermann's *Mittheilungen*, 1883, s. 404, and compare the same, 1878, s. 465. Dr. Martin elsewhere gives a vocabulary of the Chauques of Chiloe. It is pure Araucanian (*Zeitschrift für Ethnologie*, 1877, s. 168).

built in proportion.* In color they are a reddish brown, and have aquiline noses and good foreheads. They care little for a sedentary life, and roam the coast as far north as the Rio Negro. They are not without some religious rites, and are accustomed to salute the new moon, and at the beginning of any solemn undertaking to puff the smoke of their pipes to the four cardinal points, just as did the Algonquins and Iroquois.†

Their language differs wholly from the Araucanian, though it has borrowed many words from it. An interesting fact illustrating its stability in spite of their roving life has been brought out by Ramon Lista. He has compared its present form with the vocabulary of it given by Pigafetta in his voyage in 1520, and shows that in the intervening generations it has undergone scarcely any change.‡

Von Martius believed that a connection between the Patagonian and the Tapuya stocks could be shown, and gives a tabular comparison of the two.§ I have extended this by means of Ramon Lista's vocabulary of the former and Dr. Ehrenreich's corrected forms of the Tapuya, and conclude that the resemblances are illusory, depending on incorrect orthography of the sounds.

* On the stature of the Patagonians, see the very complete study of D'Orbigny, *L'Homme Américain*, Vol. II., pp. 26-70.

† Lt. Musters, "On the Races of Patagonia," u. s., p. 194, sq.

‡ Ramon Lista, *Mis Esploraciones y Descubrimientos en Patagonia*, p. 116 (Buenos Aires, 1880). This author gives, pp. 125-130, a full vocabulary of the "Choonke" as it is in use to-day.

§ *Ethnographie und Sprachenkunde*, Bd. I., s. 313.

About the beginning of the last century the tribes known as Poyas (*Pey-yuy*) and Reyes (*Rey-yuy*) were collected at a Mission established on Lake Nahuelhuapi, about south latitude 42°. Hervas reports them as speaking a language radically different from the Araucanian, and probably they should be classed with the Tzonecas.*

On the inhospitable shores of Tierra del Fuego there dwell three nations of diverse stock, but on about the same plane of culture. One of these is the *Yahgans* or Yapoos, on the Beagle canal; the second is the *Onas* or Aonik, to the north and east of these; and the third the *Aliculufs*, to the north and west.

Of these the Yahgans are the best known, through the efforts of the English missionaries who have reduced their language to writing. It is a polysyllabic, agglutinative tongue, with both pre- and suffixes, and is extremely rich in expressions for the ordinary needs of their life. The verb has four numbers, a singular, dual, trial and plural. It does not seem in any way related to the Aucasian stock.†

The tongue of the Onas, who are known as the *Yakanna-Cunni*, is apparently connected with the Tsoneca or Patagonian, which people they also resemble in stature and physical traits.‡

* *Lettres Ed. et Curieuses*, Tome II., p. 88; Hervas, *Catalogo de las Lenguas*, Tom. I., p. 136.

† See Lucien Adam, *Grammaire de la Langue Jagane* (Paris, 1885). Dr. Darapsky thinks this tongue reveals a common point of divergence with "los idiomas meso-Andinos." *Boletin del Instituto Geog. Argentino*, 1889, p. 287.

‡ See Dr. Hyades, in *Revue d' Ethnographie*, Tome IV., No. VI., and the chapter "L'Ethnographie des Fuégiens," in L. F. Martial,

The Fuegians are generally quoted as a people on the lowest round of the ladder of culture; and so they are painted by many observers. They have no government, they can count only to three, ordinary family affection is not observable, and even mothers manifest a lack of love for their offspring. Their shelters are wretched, and they go almost naked in a climate which is both cold and damp.

On the other hand, they display singular ingenuity in their utensils for hunting and fishing; they use the sling, the club, the bow, the bola and the lance; the women weave reed baskets so firmly that they will hold water, and their bark canoes are light and seaworthy.

In hunting they have the service of a native dog which they have trained, and whose welfare they look after with sedulous attention. Though devoid of idols and external rites of worship, they manifest in many ways a sense of religion. Thus the relations of the sexes are surrounded with ceremonies of fasting and bathing, to neglect which would entail misfortunes, and the name of the dead is not pronounced out of superstitious awe. The songs and legends of the Yahgans show some imaginative power. Many of them relate to the marvelous achievements of the national hero, *Umoara*, who appears to be a wholly mythical individual. Their strongest passion would seem to be for personal adornment, and for this purpose shells, vegetable beads, bright pebbles and variegated feathers, are called into requisition.*

Mission Scientifique du Cap-Horn, Tome I., Chap. VI. (Paris, 1888).
Yakana-cunni means "foot people," as they did not use horses.

*Dr. Domenico Lovisato, in *Cosmos*, 1884, fas. IV.

These traits are not those of an enfeebled intellect, and an examination of their physical powers supports a favorable opinion of their capacities. Some of them are unusually tall and strong, especially those on the east coast. Their skulls are mesocephalic and prognathic, and their brains, which have been examined most carefully by a German anatomist, show not a single point of inferiority to the average European brain.*

From examinations which have been carried on in the numerous shell-heaps which line the shores, there is no evidence that any other people ever occupied the islands. Skulls and relics are such as those of the present inhabitants.† The total number of these is about 8000, nearly equally divided between the tribes named.

The classification of the smaller tribes under the above stocks is not yet complete. So far as I can make it out, it is as follows:

ALIKULUF LINGUISTIC STOCK.

Alikulufs, on the western end of the Beagle Channel.

Karaikas, south of the Alikulufs.

ONA LINGUISTIC STOCK.

Aoniks or *Onas*, on Magellan Strait, both shores.

Huemuls, near Skyring and Otway Bays.

Irees, see *Pescherees*.

Oensmen, see *Aoniks*.

Pescherees, on central portions of the Strait.

Yacanas, see *Aoniks*.

* Dr. Johann Seitz, in *Zeitschrift für Ethnologie*, 1886, p. 267 268.

† Domenico Lovisato, *ubi supra*.

YAHGAN LINGUISTIC STOCK.

Kennekas, see *Takanikas*.

Takanikas, on both shores of the Beagle Channel.

Yahgans, see *Yapoos*.

Yapoos, on the central Beagle Channel.

The opinion has been advanced by Dr. Deniker of Paris,* that the Fuegians represent the oldest type or variety of the American race. He believes that at one time this type occupied the whole of South America south of the Amazon, and that the Tapuyas of Brazil and the Fuegians are its surviving members. This interesting theory demands still further evidence before it can be accepted. It is not confirmed by such linguistic comparisons as I have been able to institute.

* At the Congrès des Américanistes, Paris, 1890.

LINGUISTIC APPENDIX.

THE linguistic classification of the American tribes is at present imperfect in many regions on account of the incomplete information about their tongues. A proper comparison of languages or dialects includes not merely the vocabulary, but the grammatical forms and the phonetic variations which the vocal elements undergo in passing from one form of speech to another. In some respects, the morphology is more indicative of relationship than the lexicon of tongues; and it is in these grammatical aspects that we are peculiarly poorly off when we approach American dialects. Yet it is also likely that the tendency of late years has been to underestimate the significance of merely lexical analogies. The vocabulary, after all, must be our main stand-by in such an undertaking.

For that reason I have thought it worth while to bring together a short list of common words, and show their renderings in a number of American tongues. Inasmuch as the languages north of Mexico—those in the United States and Canada—have been frequently studied and are readily accessible in published books, I have confined my specimens to the tongues of the central and southern regions of the continent.

The words I have selected for the vocabulary are those which I think would be most likely to indicate relationship, when such existed. But as every comparative linguist is aware, neither these nor any words are free from the risk of ambiguity and equivocation. Thus, in many languages there are two or three different terms for "man," as *homo*, *vir* or *male*; "woman" is *wife* or *female*; "sun" and "moon" are often merely descriptive terms or synonyms of day, light, night and darkness; the parts of the body have in American tongues the personal possessive noun prefixed or suffixed; what is worse, the terms for such may differ with the person, as in Kechua, where the word for "eye," "arm," etc., differ as it is *my* or *thy* eye, etc. "Hand" and "arm," "foot" and "leg," are frequently not discriminated, the corresponding words meaning properly "upper extremity," "lower extremity," etc.; and so on for almost every word that could be chosen.

The proper inference to draw from these facts is, not that a comparison of vocabularies is worthless or nearly so, but just the contrary. Where we find that a short vocabulary, imperfect for the above reasons, and still more so for the general ignorance of linguistics on the part of collectors, and the varying values they give to the alphabets employed, yet reveals identities with others, we are justly authorized to consider such analogies as highly significant and suggestive of profounder comparisons.

YUMA DIALECTS NEAR THE GULF OF CALIFORNIA.

	<i>Cochimi.</i>	<i>Guaicuru.</i>	<i>Seri.</i>	<i>Yuma.</i>
Man,	uami, tama,	éte, <i>pl.</i> ti,	eketam,	hamuk.
Woman,	wakoe, wuetu,	anai,	ekemam,	hanya.
Sun,	ibo, ibunga,	untairi,	shaa, rahj,	inyaa.
Moon,	gamma,		isah,	kilshia.
Fire,	usi,		amak,	aua.
Water,	kahal,		ahj, aχ,	aha.
Head,	agoppi,		ihlit,	ilta.
Eye,	ayibika,		ito,	ido.
Ear,			istla,	ismahlka.
Mouth,	ahà,		iten,	ya-à.
Nose,		namu,	ife,	ihu.
Tongue,			ipχl,	ehpelh.
Teeth,			itast,	ehdoh.
Hand,	neganna,	titshuketa,	intlash,	israhl.
Foot,	agannapa,		itova,	ime.
House,	ajihuenen,	ambuja.	aki,	ava.
1,	teguep,		tashχo,	sitik.
2,	goguò, kamoe,		ko-okχ,	o'ak.
3,	kombio,	meakunju,	ka-pka,	hamok.
4,	magacubugua,		kshuχkua,	hoba.
5,	naganna teguep,		ko-oχtom,	harabk.

The above vocabularies illustrate the extension of the Yuma stock to the southward. The Cochimi and Guaicuru are remote dialects, but of positive affinities. The Yuma words which I have added for comparison are principally from the Mohave dialect, and are taken from the vocabularies published by the "U. S. Geographical Surveys west of the 100th Meridian."

The Seri words are chiefly from the satisfactory vocabulary obtained by the late John Russell Bartlett. The relationship of the dialect to the Yuma stock is evident.

DIALECTS OF THE UTO-AZTECAN STOCK.

	<i>Tarahumara.</i>	<i>Pima.</i>	<i>Nahuatl.</i>	<i>Ute.</i>
Man,	tehoje,	tinot,	tlacatl,	tawatz.
Woman,	muki, upi,	uba,	cihuatl,	oubea.
Sun,	taica,	tash,	tonatiuh,	tabi.
Moon,	maitsaca,	{ maskat, massar, }	metztli,	mytogé.
Fire,	naïki,		tletl,	tē vua, M.
Water,		{ shontik, sueti, }	atl,	pah.
Head,	moola,	nemoh,	totzontecon,	totsein,
Eye,	pusiki,		ixtolotli,	puevi.
Ear,	nechcala,	naank,	nacaztli,	nangk.
Mouth,			camatl,	temb.
Nose,	jachcala,		yacatl.	yaga, M.
Tongue,	tenila,		nenepilli,	lengi, M.
Tooth,		ptahan,	tlantli,	tahwan.
Hand,		noh,	maatl,	mōu, makhde.
Foot,	tala,		icxilt,	igug.
House,		{ nip-ki, ki, }	calli,	kahan.
1,		yumako,	ce,	shui.
2,	oca, guoca,	kuak,	ome,	wyune.
3,		vaik,	yey,	pay.
4,		ki-ik,	nahui,	vachue.
5,		huitas,	macuilli,	manuy.

The eight dialects which I give from the extensive Uto-Aztecan stock will illustrate the relationship of its members. The words marked M. in the Ute or Shoshonian vocabulary belong to the Moqui dialect, which appears to approach nearer the Aztecan branch than the speech of the northern tribes. The Tepehuana words are from the vocabulary obtained by M. Tarayre, and published in his *Exploration* (see *anté*, p. 136). I have placed the geographical extremes, the Nahuatl and the Ute, side by side, to illustrate the really striking similarity of these dialects, the one

DIALECTS OF THE UTO-AZTECAN STOCK.—(*Continued.*)

	<i>Heve.</i>	<i>Tepehuana.</i>	<i>Opata.</i>	<i>Cora.</i>
Man,	dor,	chiuaitcam,	uri,	teuit, teáta.
Woman,	{ hub, hoquis, }		osi, <i>pl.</i> nau,	uita.
Sun,	tuui,	tanaol,	tât,	xeucat.
Moon,	metzat,	maasol,	metza,	añahupi.
Fire,	te,	tay,	thai,	teujcuarit.
Water,	bat,	suudai,	vat,	ahti.
Head,	zonit,	maao,		muuti.
Eye,	vusit,	bopoe,	măua,	hiuziti.
Ear,	nacat,			naxaihti.
Mouth,	tenit,	intrigni.		
Nose,	dacat,	yak.		
Tongue,	nenet,	nuin,		nanuriti.
Tooth,	tanus,	tatama.		
Hand,	mamat,	ingnaono,		moamati.
Foot,	tarat,	incaiao,		chapoariti.
House,	quit,	văak,	kit.	
1,	sei,	homad,	se.	
2,	godum,	gaok,		hualpoa,
3,	veidum,	baech,	vaide.	
4,	nausi,	maukao,	nago.	
5,	marqui,	chetam,	marizi.	

current on the Columbia river, the other extending to Chiriqui lagoon, near the Isthmus of Panama. Buschmann, in his works already referred to (*anté*, p. 119), cites numerous other examples.

Still more substantial proof of the unity of this stock is furnished by the comparative grammar of its different members. These present various phases of morphological development, but always on the same lines. The Nahuatl is much the higher of them all, and in some of its forms attains to a truly inflectional character, as has been shown by Professor Steinthal.

CENTRAL STOCKS.

		<i>Totonaco.</i>		<i>Tarasco.</i>	<i>Otomi.</i>
		<i>Upper.</i>	<i>Lower.</i>		
Man,				tziuereti,	n'yōh.
Woman,	chajat,		tac, taco,	cucha, cuxareti,	datsu, sitzu.
Sun,	co,		chichini,	huriata,	'hiadi.
Moon,	papa,		malcoyo,	cutzi,	rzana.
Fire,				turiri,	tzibi.
Water,	chochot,		xcan,	itsi,	dehe.
Head,	ayxaca,			ehpu,	fia.
Eye,	lacaztaponitni,		lacacholna,	eskua,	da.
Ear,	tangan,		cacaxcolna,	kutsikua,	gu.
Mouth,	quilni,		quelpaja,	haramekua,	ne.
Nose,	quincan,		quin,	tz-ure,	siu.
Tongue,				katamba,	qhane.
Tooth,	tatzanitni,		taizalatna,	sini,	ttzi.
Hand,	macanitni,		macatatna,	haqui,	'ye.
Foot,	tohuan,		tojolat,		gua.
House,				quahta,	ngu.
1,	tom,		omollana,	ma,	'ne, r'e.
2,	toy,		toy,	tziman,	yoho.
3,	toto,		toton,	tanimō,	hiu.
4,			tat,	tamu,	gooho.
5,			quitziz,	yumu,	cqta.

The Totonaco is spoken in two diverse dialects by the inhabitants of the plains and the uplands. The difference is not so great as appears in the written tongue, as they are mutually intelligible.

A number of works on the Tarascan language have recently been edited or written by Dr. Nicolas Leon, of Morelia, Michoacan, so that there is abundant material for the study of the tongue.

The Otomi presents so many sounds unfamiliar to the European ear that the attempt to represent it by our alphabets can be only remotely accurate. I have a very extensive MS. dictionary of the tongue, based on the *Vocabulario Mexicano* of Molina.

CENTRAL STOCKS.

	<i>Zoque.</i>	<i>Mixe.</i>	<i>Zapotec.</i>	<i>Mixtec.</i>
Man,	puen,	yai-tohk,	beni niguio,	yee,
Woman,	yoma,	toix,	beni gonaa,	ñahadzehe.
Sun,	hama,	xeuh,	{ chii. gobiche.	
Moon,	poya, xapa,		xona xibeo.	
Fire,	hucata,	xōōn,	guii.	
Water,	na,	noo,	niza.	
Head,	copac,	cobaac,	icqui,	dzini.
Eye,	vitem,	huin,	bizaloo,	tenu.
Ear,	tatzec,	tatzc,	tiaga,	tutnu, dzoho.
Mouth,	angnaca,	au,	rua, rohua,	yuhu.
Nose,	quina,	hōp,	xii,	dzitui.
Tongue,	totz,	yen,	luuchi,	yaa.
Tooth,	tetz,	tōtz,	chitalaaga,	noho.
Hand,	tzamguica,	cōō,	naa,	daha.
Foot,	manguica,	teic,	nii.	
House,	tōc, tenk,		yuu, lichi,	huahi.
1,	tuma,	tuuc,	tubi,	ek.
2,	metza,	metzc,	tiopa,	uvui.
3,	tucay,	tucoc,	chona,	uni.
4,	macscuy,	mactaxc,	tapa,	kmi.
5,	mosay,	mocoxc,	guayo,	hoho.

In the above vocabularies the relation of the Zoque to the Mixe is more clearly shown than that of the Zapotec to the Mixtec. A more extended comparison of the two latter has been instituted by Pimentel in his work on the languages of Mexico, which appears to strengthen the belief that they belong to the same stock. Prof. Friedrich Müller, however, continues to regard them as separate stocks (*Grundriss der Sprachwissenschaft*, Bd. II., Ab. I., s. 298, sq.). The question is discussed with fullness in the introduction, by Dr. Nicolas Leon, to the *Arte del Idioma Zapoteco*, of Juan de Cordova (ed. Morelia, 1886), to which the student is referred. I think the evidence is sufficient to regard them as allied idioms. The Zapotec of the mountains, *Zapoteco serrano*, differs considerably from that which is given above.

CENTRAL STOCKS.

	<i>Chinantec.</i>	<i>Huave.</i>	<i>Maya.</i>	<i>Chapanec.</i>
Man,	{ cha, ñuh,	{ náshui,	uinic,	dipaju, naha.
Woman,	mui,	{ naptah, nostah,	{ ixal,	nafui.
Sun,	mañui,	noet,	kin,	napiju, nyumbu.
Moon,	zei,	cahau,	u,	yuju.
Fire,	nigei,		kaak,	niiyu.
Water,	mui,		ha,	nimbu.
Head,	gui,		pol, hol,	tkima.
Eye,	manihi,		uich,	uaté.
Ear,			xicin,	nyujmi.
Mouth,	cuhaha,		chi,	duñi, nunsu.
Nose,			ni,	nyungu.
Tongue,			uak,	baelu, griji.
Tooth,			co,	niji.
Hand,	nquaha,		cab,	dila, diro.
Foot,	nni,		uoc, oc,	laku, gura.
House,	nu,	piem,	otoch,	nangu.
1,	cna,	anop,	hun,	tike, ticao.
2,	tno,	epoem,	ca,	jomi, hão.
3,	nne,	erof-poef,	ox,	jami, havi.
4,	quiu,	apûkif,	can,	haha.
5,	ña,	akukif,	ho,	hãomo.

The Chinantec is included in the Zapotec stock by Pimentel, who follows the dictum of Hervas, confessedly without examination (*Lenguas Indigenas de Mexico*, Tom. III., cap. 37). This was not the opinion of Dr. Berendt, who has compared both tongues, and a comparison of the short vocabularies which I give shows only one word, that for "foot," which is identical in both.

The Huaves, who claim a migration from the south, do not reveal a connection in their language with any of the southern stocks.

The Maya of the Vocabulary is the pure tongue as spoken in Yucatan. Its various dialects have been carefully studied by Berendt, Stoll and others. The most corrupt is probably the Chaneabal of Chiapas, of which I gave a short analysis in the *American Anthropologist*, Jan., 1888.

INTER-ISTHMIAN STOCKS.

	<i>Musquito.</i>	<i>Lenca.</i>	<i>Xicaque.</i>	<i>Ulva.</i>
Man,	waikna,	amashe,	jomé,	all.
Woman,	mairen,	mapu,	pitmé,	yall.
Sun,	lapta,	gasi,	behapoi,	moa.
Moon,	kati,		numui,	uaigo.
Fire,	pauta,	uga,	inquemoos,	ku.
Water,	li,	güas,	sur,	uas.
Head,	lel,	toro,	laipuco,	tunik.
Eye,	nakro,	saring,	non,	miniktaka.
Ear,	kiama,	yang,	fora,	tabaki.
Mouth,	bila,	ingori,	muipane,	dinibas.
Nose,	kakma,	napse,	meguin,	nangitak.
Tongue,	twisa,	navel,	rin,	tuki.
Tooth,	napa,	nagha,	quir,	anaki.
Hand,	mita,	gulala,	mor,	tumi.
Foot,	mena,	güagl,	san,	kalkibas.
House,	watla,	tahu,	chef,	u.
1,	kumi,	ita,	pani,	{ aslar.
				{ aloslag.
2,	wal,	na,	matís,	muye bu.
3,	niupa,	lagua,	contis,	muye bas.
4,	wälwäl,	aria,	urupan,	muya runca.
5,	matasip,	saihe,	casanpani,	muye sinca.

The above four vocabularies are taken from MS. material in my possession collected by E. G. Squier and Dr. C. H. Berendt. They do not appear to indicate the slightest relationship either between themselves, or with any other known stocks. The careful researches of Lucien Adam on the Musquito grammar do not bring it into connection either with the Carib or the Chibcha families, with which it has sometimes been supposed to be affined.

The Lenca dialects, of four of which I have vocabularies, do not differ materially, but the exact distribution of the stock at the period of the conquest is uncertain.

INTER-ISTHMIAN STOCKS.—(Continued.)

	<i>Guatuso.</i>	<i>Subtiaba.</i>	<i>Matagalpan.</i>	<i>Xinca.</i>
Man,	ochapa,	rabu,	misa,	jumu, jurac.
Woman,	curijuri,	rabaku,	yūeiya,	ayala.
Sun,	toji,	daska,	lal,	pari.
Moon,	ziji,	dūkká,	aiko,	ahua.
Fire,	cuepala,	agu,	lauale,	ura.
Water,	ti,	ila,	li,	ui.
Head,	machia,	edi, ekxu,	ma'ike,	gesalia.
Eye,	mafi zicu,	siktu,	kufike,	yurati.
Ear,	nato coto,	nyahu,	topalke,	mami.
Mouth,	macoquica,	daghu,	tañake,	xajac.
Nose,	natain,	dakko,	namke,	jutu narin.
Tongue,	macu,	duhun,	tomamke,	eilan.
Tooth,	oca,	sinnyu,	ninike,	jari xajan.
Hand,	macu quichia,	nyau,	panake,	pum, pu.
Foot,	naho quichia,	nasku,	napake,	guapan.
House,	uh,	guá,	u,	macu.
1,	anacachumaru,	imba,	bas,	ica.
2,	ponca, pangí,	apu,	buyo,	ti, piar.
3,		assu,	gūatba,	uala.
4,	paque, posai,	asku,	bota'jio,	iria.
5,		uissu,		píjar.

The Guatuso is taken from the vocabularies collected by Bishop Thiel, and several times republished. The remaining three are from MS. materials collected by Dr. C. H. Berendt. The Xinca I have previously published, with a general discussion of the tribe, in the *Proc. of the Amer. Philosoph. Soc.*, 1885.

The Matagalpan or "Chontal of Nicaragua" (see *anté*, p. 149), is from the vocabulary collected by the Rev. Victor Noguera. It appears to stand quite alone. A few remote resemblances to the Talamanca dialects of Costa Rica seem to exist, which, if real, would connect the Matagalpan with South American stocks.

COLUMBIAN STOCKS.

	<i>Cuna.</i>	<i>Changuina.</i>	<i>Andaqui.</i>	<i>Tucura.</i>
Man,	mastule,	taro,		himbera.
Woman,	puna,	bia.		
Sun,	ipe,	querele,	caqui,	ahumautu.
Moon,	ni,	sirala,	mitae,	jedeco.
Fire,	chau,	quebu,	jifi (=candle).	
Water,	ti,	si, ti, yi,	jiji,	pania.
Head,	chag'la,	{ duku, quinunuma, }	quinaji,	poru.
Eye,	ibia,	oko,	sifi,	tabu.
Ear,	ugua,	kuga,	sunguajo,	quiburi.
Mouth,	kagya,	caga,		ité.
Nose,	ûchue,	neko,	quífi,	kaimbu.
Tongue,	guapina,	cuba,	sonae.	
Tooth,	nugada,	zuu,	sicoga.	
Hand,	changa,	kulosol,	sacaá,	juwajimi.
Foot,	nacamali,	ser,	soguapana,	jenu.
House,	neca,	hu,	cojoo,	té.
1,	quenchigue,	que,		aba.
2,	pogua,	como,		unmé.
3,	pagua,	calabach,		unpia.
4,	paquegua,	calacapa,		kimare.
5,	atale,	calamale,		cuesuma.

The Cuna and the Changuina or Dorasque are from M. Alph. Pinart's various publications on these dialects; the Andaqui from the collections of the Presbyter Albis; and the Tucura, a Choco dialect, from the report of Dr. A. Ernst (*Zeitschrift für Ethnologie*, 1887, 302). The last mentioned was obtained on the upper Sinu river, near the junction of the Rio Verde. It is not of the San Blas (Cuna) family, but clearly Choco.

I have already referred (p. 200) to some slight similarity of the Andaqui to the Chibcha; but until we have more extensive material of the former, the question must be left open.

DIALECTS OF THE CHOCO STOCK.

	<i>Noanama.</i>	<i>Tado'.</i>	<i>Chami.</i>	<i>Sambo or Choco.</i>
Man,	emokoyda,	umujina,	muguira,	{ umachina. muguira.
Woman,	uida,	uena,	huera,	auera.
Sun,	edau,	pesia,	umata,	pisia, imuanba.
Moon,	edau,	jedego,	tedeco,	jedecó.
Fire,	igdn,	tibúa,	tibuzhia,	tūjoor.
Water,	du,	panea,	pania,	{ pania. do= <i>river</i> .
Head,	púdu,	paru',	boro,	poro.
Eye,	daü,	taü,	tao,	tau.
Ear,	cachi,	kūru',	guru,	juru.
Mouth,	i,	itai',	gu,	ji, itai.
Nose,	keun,	kung,	y,	cung, jun.
Tongue,	meujina,	kinóme,	guiranee,	quirame.
Tooth,	hierra,	kida',	guida,	tida.
Hand,	hua,	hua',	tua,	jua.
Foot,	bopidi,	jinuga',	tiui,	jinu.
House,	di,	tee',		te, dhe.
1,	aba,	aba,	aba,	aba.
2,	nu,	ume,	ube,	ome.
3,	tanjupa,	kimaris,	umpea,	ompea.
4,	jay upa,	guasuma,	guimare,	quimari.
5,	juambo,	kisona,	guasome,	guasoma,

The Choco family had probably at one time a much wider extension than we are familiar with in historic times. I have suggested (*anté*, pp. 274, 275), that even the sparse material for comparison as yet available seems to indicate an affinity with the Betoya stock. As our knowledge of the Orinoco and the Columbian region extends, probably other tribes will be discovered speaking related dialects. The four vocabularies which I give above serve to illustrate the comparatively slight differences of the phonetics. Another dialect, the Tucará (see *anté*, p. 176, note), is given on the preceding page.

DIALECTS OF THE CHIBCHA STOCK.

	<i>Chibcha.</i>	<i>Aroac.</i>	<i>Chimila.</i>	<i>Guaymi.</i>
Man,	muysca,	sōkue,	sōōkué,	nitocua.
Woman,	ti-güi,	yun-kue,	yuunkué,	meri.
Sun,	sua,	yuia,	neiin-á,	ninguane.
Moon,	chie,	tii,	tii,	só.
Fire,	gata,	gué,	uuñé,	nocua.
Water,	sie,	yira,	niitake,	si, ña.
Head,	zysqui,	zankalla,	oōkrá,	thokua.
Eye,	upcua,	uba,	uaákua,	ocua.
Ear,	cuhuca,	kuhcua,	kuúsaka,	olo.
Mouth,	quihica,	kōhka,	kōōkua,	ca da.
Nose,	saca,	niksaiñ,	naañakra,	secua.
Tongue,	pcua,	kuca,	kuá,	tudra.
Tooth,	sica,	kōhka (?),	né,	tu.
Hand,	yta,	atta-kra,	aattakra,	cuse.
Foot,	quihicha,	ksa, pukré,	pookré,	ngoto.
House,	güe,	húi,	aátaka,	jú.
1,	ata,	kuté,	kuté,	kr-ati.
2,	boza,	moga,	muuhná,	kro-bu.
3,	mica,	maigua,	teieme',	kro-mai.
4,	muihica,	murieié,	murieié,	kro-boko.
5,	hisca,	achigua,	{ kutendeu- rehattagra, } kro-rigua.	

The relations of the Chibcha dialects are so important in their bearings on the question of the migrations from South into North America, that in addition to the specific comparisons on page 186, I here add vocabularies of six dialects; three, the Chibcha, Aroac and Chimila, from south of the Isthmus, and three, the Guaymi, Talamanca and Boruca, from north of it.

The Chibcha proper is a language of extremely difficult phonetics for a European, and doubtless the Spanish orthography, in which it is rendered, is far from accurate.

The fundamental identity of the dialects of the stock becomes much more apparent after a study of their laws of phonetic variation, as set forth by Dr. Max Uhle (*anté*, p. 185).

CHIBCHA STOCK.			COLUMBIAN STOCKS.	
	<i>Talamanca.</i>	<i>Boruca.</i>	<i>Paniquita.</i>	<i>Timote.</i>
Man,	vipá,	con-rokh,	piz, petam,	{ mayoi. kak, nachu.
Woman,	arácra,	kam-rokh,	neyo, cuenas,	{ kursum. naktun.
Sun,	divu,	kak,	itaqui,	mpá.
Moon,	turu,	tebe,	ate.	
Fire,	yuk,	dukra,	ipi,	chirip, fú.
Water,	di,	di,	yo,	chimpué.
Head,	tsuko,	sagra,	dicté,	kicham.
Eye,	vubra,	caix,	yafi.	
Ear,	cucúh,	cuaga,	tógnue,	timabum.
Mouth,	sacu,	casa,	yugue,	{ macabó. karichnuck.
Nose,	chi'scah,	xiska,	inz.	
Tongue,	ku,		tone,	chiqui vú.
Tooth,	aka,		quith.	
Hand,	ura,	dijurre,	cose.	
Foot,	iucra,	di-krescua,	chinda,	kuju.
House,	huh,		yath,	nakot.
1,	et,		yas, vitech,	kari.
2,	bug,		enz,	gem.
3,	mang,		tec,	sut, hisjut.
4,	keng,		panz,	pit.
5,	skera,		taz,	{ caboc. mubes.

The Talamanca and Boruca are Chibcha dialects (see preceding page). The Paniquita (see *anté*, pp. 190-192) has no positive affinities with its neighbors. The grammatical character of its Paez dialect has been analyzed by Fr. Müller (*Grundriss der Sprachwissenschaft*, Bd. II., Ab. I., p. 356). He points out some similarity in the numerals to the Kechua and Goajiro. But this is not significant.

The various vocabularies of the Timote stock differ considerably, and none of them is at all complete.

	DIALECTS OF THE BARBACOA STOCK.		DIALECTS OF THE COCANUCO STOCK.	
	<i>Colorado.</i>	<i>Cayapa.</i>	<i>Mogux.</i>	<i>Totoro.</i>
Man,	zachi, unilla,	liu-pula,	muck,	mujel.
Woman,	sona, sonala,	su-pula,	schut,	ishu.
Sun,	ió,	pacta,	puizarum.	
Moon,	pe,	macara,	puil.	
Fire,	ni,	ninguma,	ipt.	
Water,	pi,	pi,	pui.	
Head,	muchú,	mishpuca,	pusro,	pushu.
Eye,	cacó,	capucua,	cap,	caprchul.
Ear,		pungui,	calo.	
Mouth,	fiquiforo,	tipaqui,	chidbchab,	trictap.
Nose,	quinfu,	kijo,	kind,	kim.
Tongue,		nigca,		nile.
Teeth,		tesco,		tchugul.
Hand,	tede,	fia-papa,	coze,	cambil.
Foot,	nede,	ne-papa,	kadzigd.	
Home,	ia,	ya,	yaatk,	ia.
1,	manga,			kanendova.
2,	paluga,			pabuin.
3,	paimun,			puinbun.
4,	humbaluló,			pipuin.
5,	manta,			tchajpun.

A comparison of the above vocabularies will probably strengthen the supposition I have advanced (*anté*, p. 199), that these two stocks were originally branches of one and the same. The material on all the dialects is scanty, and for a proper grammatical collation is quite wanting. As they are yet living idioms, it is to be hoped that some energetic traveler will supply the facts to solve the question. The sources of the vocabularies are indicated in the text.

PERUVIAN STOCKS.

	<i>Kechua.</i>	<i>Aymara.</i>	<i>Yunca.</i>	<i>Atacameño.</i>
Man,	runa,	hague, chacha,	ñofoen,	sima.
Woman,	huarmi,	marmi,	mecherroec,	licau.
Sun,	inti,	inti, villca,	xllang,	capim.
Moon,	quilla,	phakhsi,		çamur.
Fire,	nina,	nina,		humur.
Water,	una, yacu,	uma,	la, leng,	puri.
Head,	uma,	ppekeña,	lecq,	hlacsi.
Eye,	ñaui,	nayra,	locq,	kjepi.
Ear,	rinciri,	hinchu,	medeng,	aike.
Mouth,	simi,	lacca,	ssap,	khaipe.
Nose,	sencca,	nasa,	fon, misi,	sipe.
Tongue,	ccallu,	lakhra,	ed,	lasi.
Tooth,	quiru,	lacca, cchacca,	cecquang,	quenne.
Hand,	maqui,	ampara,	mœcqa,	suyi.
Foot,	chaquí,	cayu,	loc,	khoche.
House,	huasi,	uta,	enec, lec, an,	turi.
1,	huc,	mayni, maya,	onõc, na,	sema.
2,	iscay,	pani, paya,	atput, pac,	poya.
3,	quimsa,	quimsa,	çopæt, çoc,	palama.
4,	tahua,	pusi,	nopoet, noc,	chalpa.
5,	pichka,	pisca,	exllmätzh,	mutзма.

The wide differences between the four main Peruvian stocks are seen in the above vocabularies. The Kechua and Aymara alone have anything in common. The Yunca is presented in the Mochica dialect, which is that adopted by Carrera in his Grammar. The vocabulary of the Etenes, as furnished by Bastian, differs from it only in the word for "eye," *tassack*, and "head," *chätz*, which is remarkable, considering the extreme difficulty of the Yunca phonetics. The grammars of these three tongues are carefully analyzed by Fr. Müller.

The Atacameño words are from the authorities quoted on p. 227. Of its grammar we have only the imperfect account furnished by San Roman, which seems to remove it from the character of the Kechua and Aymara.

SOUTH ATLANTIC LINGUISTIC STOCKS.

	<i>Arawak.</i>	<i>Tapuya.</i>	<i>Tupi.</i>	<i>Kiriri.</i>
Man,	wadili,	{ samnaha, waha,	} apyaba,	klöih.
Woman,	hiaeru,	zokna,	cunhá,	kütsi.
Sun,	haddali,	taru te mu,	curasse,	utschih.
Moon,	katti,	kmuniak,	jaçi,	cayacu.
Fire,	hikkihi,	chompek,	tatá,	issuh.
Water,	wuini,	muniã,	hy,	dzu.
Head,		krain,	canga,	tzambu.
Eye,	akussi,	ketom,	tesa,	po-nubi.
Ear,	adikkehi,	nunk-hôn,	namby,	benjen.
Mouth,	uelleru kuhu,	nimã,	juru,	oriza.
Nose,	issirihi,	kigin,	iting,	nambih.
Tongue,	uejehi,	kzigiok,	japecong,	nunuh.
Tooth,	ari,	{ zhún, yune,	} ainha,	dza.
Hand,	uekabbu,	po,	ypo,	mussang.
Foot,	ukutti,	po,	py,	bouih.
House,	bahü,	kjiemmm,	oka,	era, bate.
1,	abba,	pogik,	jebe,	bihe.
2,	biamã,	nom,	mucuing,	wachani.
3,	kabbuhin,	tscho caorhu,	musapui,	wachani dikie.
4,	bibiti,	iapes chacoron,	erundi.	
5,	abbatekabbe,	nonhoron,		

The four chief stocks of the eastern Amazon region present a fundamental diversity both in vocabulary and grammar. The Arawak is shown as it is, as current in Guiana and along the northern affluents of the Amazon; the Tapuya is in the dialect of the Boto-cudos, as presented by Dr. Paul Ehrenreich; the Tupi is the "lingua geral" of Brazil; and the Kiriri is from the *Arte* of Mamiani.

In most of the South Atlantic stocks the numerals are imperfectly developed, all quantities above three being usually expressed by compound words.

DIALECTS OF THE ARAWAK STOCK.

	<i>Chontaquiro.</i>	<i>Baniva.</i>	<i>Piapoco.</i>	<i>Guana.</i>
Man,	geji,	enami,	ima,	{ hapohitai. tahanan.
Woman,	sichuné,	neyau,	inanahi,	zeeno.
Sun,	intiti,	amorci,	ureri,	kat-hai.
Moon,	cachiri,	{ pia, achita,	} keri,	kohaivai.
Fire,	chichi,	arsi,	kitsai,	incu.
Water,	uné,	ueni,	huni,	houana.
Head,	huejijua,	{ ibupi, nombo,	} ivita,	kombaipoi.
Eye,	huijarsajé,	nu puri,	nouto ui,	onguei.
Ear,	huijepe,	notarifara,	gua-wui,	guaihaino.
Mouth,	huespé,	e-noma,	wa-numa,	baho.
Nose,	huisiri,	pe-yapa,	noulacou,	agueiri.
Tongue,	guenè,	n-hotare,	wa-nimi,	nahainai.
Tooth,	huisé,	na-si,	yai,	onhai.
Hand,	huamianuta,	capi,	ha-capi,	no.
Foot,	huisiqui,	itsipara,	ouabari,	djahavai.
House,	panchi,	panisi,	capi,	maihaino.
1,	suriti,		abehita,	poikoja.
2,	apiri,		pucheibata,	pid-djaho.
3,	noquiri,		maisibba,	mopoa.
4,	ticti,		bainoco,	honaton.
5,	tictisiri,		abemo hacapi,	houakoo.

These four vocabularies of some dialects of the Arawak stock, from localities wide apart, disclose extensive variations from the standard tongue. They are, however, rather apparent than real, and often depend on either variations in orthography, or the substitution of synonymous or allied words. This is well seen in the comparative table of thirty-six Arawak dialects presented in tabular form by Karl von den Steinen in his *Durch Central-Brasilien*, s. 294. Neither he nor Adam includes the Chontaquiro in the Arawak stock, but a comparison of vocabularies leaves no doubt about it. The Chontaquiro prefix *hue* is the Piapoco *gua*, = "thy."

DIALECTS OF THE CARIB STOCK.

	<i>Bakairi.</i>	<i>Motilone.</i>	<i>Guaque.</i>	<i>Tamanaca.</i>
Man,	uguruto,	ya'kano,	guire,	nuani.
Woman,	pekoto,	esate,	guerechi,	aica.
Sun,	tsisi,	güicho,	uehi.	
Moon,	nuna,	kuna,	nuna.	
Fire,	pě'to,	güesta,	majoto.	
Water,	paru,	kuna-siase,	tuna.	
Head,	kχinaraχu,		jutuye,	prutpe.
Eye,	kχānu',	anú,	emuru,	januru.
Ear,	kχi uanata',	pana,	janari,	panari.
Mouth,	kχi ta'λ,		indare.	
Nose,	kχana'λ,	ona,	onari.	
Tongue,	kχ u'lu,		inico,	nuru.
Tooth,	kχ ie'λ,	kiyuko,	yeri.	
Hand,	kχ ama'λ,	oma,	niñare,	jamgnari.
Foot,	kχ uχuλ,	pisa,	iyu puru,	ptari.
House,	ótá,	pesoa,	migna.	
1,	tokalole,	tukum-arko,		ovin.
2,	asage,	kos-arko,		oco.
3,	asage-tokalo,	koser-arko,		orva.
4,	asage-asage,	kosaj-taka,		
5,		oma (hand),		

The oldest existing forms of the Carib stock are believed by Von den Steinen to be preserved in the Bakairi, which I have accordingly placed first in the vocabularies of this family.

The Motilone, which is placed beside it, is one of the most northwestern dialects, and shows singular tenacity of the radicals of the language.

The Guaque, which is substantially the same as the Carijona, is the extreme western member of the family, but presents unmistakably the physiognomy of the stock.

Of the Tamanaca I have seen but incomplete specimens, but on account of its former importance, I insert it in this connection.

DIALECTS OF THE CARIB STOCK.—*Continued.*

	<i>Roucouyenne.</i>	<i>Macuchi.</i>	<i>Maquiritare.</i>	<i>Cumanagoto.</i>
Man,	okiri,	urataë,	rahuwari,	guarayto.
Woman,	oli,	nery,	wiri,	guariche.
Sun,	chichi,	uci, ouéi,	chi,	sis.
Moon,	nunu,	capoui,	nonna,	nuna.
Fire,	uapot,	apo,	guahato.	
Water,	tuna,	tuna,	tona,	tuna.
Head,	itepuru,	popahy,	iyoha	putpo.
Eye,	yanuru,	yénu, tenu,		yenur, ono.
Ear,	panari,	panure,	ihanarri,	panar.
Mouth,	uaïamu,	unta,	intarri,	umptar.
Nose,	yemna,	yuna,	yonari,	ona.
Tongue,	nulu,	unum,	iwini,	nuri.
Tooth,	yéré,	piriabura,	adderri,	yer.
Hand,	yamuru,	yanda,	arra mori,	yemiar.
Foot,	pupuru,	uta,	ohorro,	putar.
House,	pacolo,	euete,	ahute,	pata.
1,	auini,	tiuim,	toni,	tibin.
2,	uakéné,	sagané,	hake,	achac.
3,	eleuau,	siruané,	arrowawa,	achoroao.
4,		sacreré,	hake kiema,	yzpe.
5,		matiquim,		petpe.

The Roucouyenne and Macuchi are dialects on either slope of the sierra south of Guyana. Both appear to have been affected by their proximity to the Arawak stock.

The Maquiritare of the Orinoco and the Cumanagoto of the northern portion of Venezuela are comparatively closely related, and both present few foreign elements.

We may expect a thorough treatment of the comparative grammar of the Carib dialects from M. Lucien Adam, who is engaged in this study at the present time.

A large amount of material has been collected by Von den Steinen, of which but a small portion has been published. It relates principally to the southern Carib dialects.

LANGUAGES OF THE ORINOCO BASIN.

	<i>Opone and Carare.</i>	<i>Peba.</i>	<i>Yahua.</i>	<i>Saliva.</i>
Man,		comoley,	huano,	cocco.
Woman,		watoa,	huaturuna,	gnacu.
Sun,	bueno,	wana,	hini,	{ mumesesche- cocco.
Moon,	cano,	remelane,	arimaney,	vexio.
Fire,	fotó,	feula,	jigney,	egussa.
Water,	tuna,	ain,	aah,	cagña.
Head,	iube, siyoco,	raino,	frignio.	
Eye,	ieu, yeo,	vinimichi,	huiranca,	pacuté.
Ear,	itana, stana,	mituva,	ontisiui,	aicupana.
Mouth,		rito,	huiçama,	aajà.
Nose,	iena, yena,	vinerro,	unirou,	incuu.
Tongue,	inu, syno.			
Tooth,		viala.		
Hand,	iaso, iyaso,	vi-nitaily,	hui janpana,	immomó.
Foot,	idebu, stuyo,	vi nimotay,	muniumatu,	caabapa.
House,	mune,	lowarrey,	rore.	
1,		tomeulay,	tekini.	
2,		nomoira,	nanojui.	
3,		tamoimansa,	munua.	
4,		namerayo,	naïrojuíño.	
5,		taonella,	tenaja.	

The Opone and the Carare have evidently been subjected to foreign influences, but still retain the characteristics of the Carib dialects.

The Peba and the Yahua are not attached to the Carib family. They, however, reveal the traces of its influence, and appear to have adopted many words from it. Probably they are largely jargons, and between themselves indicate a rather close relationship.

Of the Saliva, which seems to stand alone, the materials are inadequate. Some texts, with an effort at a grammatical analysis, are given in the *Mithridates*, III., s. 625.

LANGUAGES OF THE ORINOCO BASIN.—(*Continued.*)

	<i>Otomaca.</i>	<i>Piaroa.</i>	<i>Guaraouna.</i>	<i>Guahiba.</i>
Man,	andoua,	ovo,	guarao,	pebi.
Woman,	ondoua,	ysaho,	{ ibama,* tira,	petiriba, C. pihaoua.
Sun,	noua,	morho,	hoke,	{ wameto, C. icatia, isota.
Moon,	oura,	chawa,	guanica,	oamito.
Fire,	noua,	ocoura,	hècouno,	isoto.
Water,	ia,	ahia,	ho,	mera.
Head,		cht,		{ pemoto hocota, C., ibun.
Eye,		chiahere,		yto huto.
Ear,			cacoco,	{ pemohuyo roto, C., nu tanipara.
Mouth,		chaha,	doco,	pinpierda.
Nose,		chihino,	ca-icari,	pepomuteito.
Tongue,		chame,		peeberta.
Tooth,		chacou,	ca-ycay,	bono.
Hand,		chumu,	ca-mahu,	napi.
Foot,		chinepo,	omu,	petahu.
House,			hanouco,	ta-habo (my).
1,	enga,		itchaca,	cahene.
2,	dé,		manamo,	nawanube.
3,	yakia,		dianamo,	acueyani.
4,	depitade,		urabocaya,	penaya autsiva.
5,	ionga pinibo,		uabachi,	cahecobe.

The above four *lengue matrice* were among the most important on the Orinoco. The Guaraouna or Warrau was, and continues to be, spoken by the tribes of the delta, who are numerous and intelligent, when they have a fair chance to live undisturbed.

Of the Otomaca only the merest fragments have been published, and my vocabulary is nearly empty.

Several recent travelers have brought back information about the Piaroa and Guahiba, some of which may be found in the eighth volume of the *Bibliothèque Linguistique Américaine* (Paris, 1882), with observations by M. Adam. C. refers to Chaffanjon.

LANGUAGES OF THE ORINOCO BASIN.—(*Continued.*)

	<i>Omagua.</i>	<i>Yarura.</i>	<i>Betoya.</i>	<i>Correguaje.</i>
Man,	ava, mena,	pume,	umasoi,	emiud, pai.
Woman,	huaina, cunia,	ibi, ain,	ro.	
Sun,	huarassi,	do,	teo-umasoi,	ense.
Moon,	yase,	goppe,	teo-ro,	paimia.
Fire,	tata,	condé,	futui.	
Water,	uni,	uui,	ocudú,	ocô.
Head,	yacue,	pacchá,	rosaca,	sijope.
Eye,	zaicana,	{ batchioo, C., jonde,	} ufoniba,	ñancoca.
Ear,	nami,			cajoroso.
Mouth,	yuru,	yao, C.		
Nose,	ti,	nappe,	jusaca,	jinguepui.
Tongue,	cumuera,	{ hihn, C., toppono,	} ineca,	chimenu.
Tooth,	say,	hundee, C.,		cojini.
Hand,	pua,	icchi,	rum-cosi,	jete.
Foot,	pueta,	tahoo, C.,	rem-ocá,	coapi.
House,	uca,			guce.
1,	uyepe,	caname,	edojojoi,	
2,	mucuica,	{ adotchami, ñoeni,	} edoi.	
3,	iruaca,	tarani,	ibutu.	
4,		adoitchemi.		
5,		canikiro.		

The Omagua is a well-marked Tupi dialect. Adam has shown the grammatical concordances clearly (*Compte-Rendu du Cong. des Amer.*, 1888, p. 496).

The Yarura and Betoya reveal faint resemblances in the words for "sun" and "tongue"; but not enough to justify assuming a relationship. Their grammars are quite unlike, that of the Yarura proceeding by suffixes, that of the Betoya by prefixes (see Müller, *Sprachwissenschaft*, Bd. II., Ab. I., s. 361).

The Correguaje shows less analogy to the Betoya in the above vocabulary than in a more extended comparison. The word for water, *ocô*, reappears in a number of dialects not akin to this stock, and is perhaps allied to the Chinchasuyu *yacu* (see *anté*, p. 205).

DIALECTS OF THE UPPER AMAZONIAN BASIN.

	<i>Pano.</i>	<i>Culino.</i>	<i>Baré.</i>	<i>Puinavi.</i>
Man,	buene, huebo,	nukung,	ehinari,	
Woman,	avio, yusabu,	auy,	hinatape,	
Sun,	bari,	wari,	camuhu,	iama.
Moon,	usde, osi,	ozü,	ki,	heboet.
Fire,	si,	yuai,	cameni,	
Water,	uaca, unpas,	uaka,	huni,	u, eti.
Head,	macho, mapo,	mazu,	dosia,	ahouiat.
Eye,	buero,	würru,	iwiti,	ambic.
Ear,	pauké,	tsaybynky,	idatini,	about.
Mouth,	uschä, ibi	ecuacha,	inuma,	ayé.
Nose,	desan,	rüky,	itti,	mohec.
Tongue,	āna,	anu,	inene,	arok.
Tooth,	seta, sena,	sita,	heheyi,	
Hand,	maku,		nucobi,	arap,
Foot,	tacu, tarú,	whyta,	isi,	asim.
House,	subo,	subu.		
1,	pajü,	uüty,	bacanacari,	atam.
2,	dabui, rubä,	rabii,	bicunama,	ahao.
3,	muken aute,	takuma,	kirikunama,	apaoui.
4,				akaouno.
5,				daptan.

The grammatical and phonetic relations of the Pano stock have been judiciously analyzed by M. Raoul de la Grasserie (*Compte-Rendu. du Cong. des. Amer.*, 1888, p. 438, sq.). The Pano and Culino are seen to be closely connected, those who use the one doubtless understanding the other.

The Baré, which is an Arawak dialect, I have inserted here for the sake of convenience.

The Puinavi is unclassified (see *anté*, p. 278). In the few words above given, those for "sun," "water," and "foot" appear to have affinities to the Baré.

DIALECTS OF THE UPPER AMAZONIAN BASIN.—
(Continued.)

	<i>Catoquina.</i>	<i>Ticuna.</i>	<i>Zaparo.</i>	<i>Tucano.</i>
Man,	eu,	iyate,	táúcuo,	euma, mina.
Woman,	ainà,	niai,	itiúmu,	numea.
Sun,	tscha,	ehajeh,	yano'cua,	muipu.
Moon,	wahlya,		cashi'cua,	mama nunpo.
Fire,	ychta,	ejheh,	anamis-hu'cua,	pecaméé.
Water,	uata-hy,	aaitchu,	muricha,	ocó.
Head,	ghy,	nahairu,	a'naca,	dipuá.
Eye,	yghó,	nehaai,	namijia,	caperi.
Ear,	masaehta,	nachiuai,	taure,	umepero.
Mouth,	nunaghy,	naha,	atupa'ma,	sero.
Nose,	opaghpó,	naran,	najúcua,	ekéá.
Tongue,	nogho,	kohny,	riricciá,	yéménó.
Tooth,	y,	taputa,	icare,	upiry.
Hand,	paghy,	tapamai,	ichiosa,	amupamá.
Foot,	achman,	nacoutai,	iñocua,	dípoca.
House,		ih, hi,	itia,	uiy'.
1,	heghykty,	hucih,	nucua'qui,	nekeu.
2,	upaua,	tarepueh,	anamis-hiñaqui,	piana.
3,	tupaua,	tomepueh,	aimucuraque,	itiana.
4,	hoyhan,	ague moujih,	{ huet sara maja itiaca,	} bapalitina.
5,		hueamepueh,	manucua,	nicumakina.

The Catoquina and Ticuna are mixed dialects or jargons, but clearly related to each other. Martius hesitated whether to assign them to his "Guck" or his "Gês" stem. They both contain elements of the Arawak, probably by borrowing. Locally they are neighbors. The vocabulary of Ticuna is from Paul Marcoy's work.

The Tucano, which is in the form obtained by Coudreau, shows elements of Betoya and Arawak. Its relationship to the Tapuya is not fully established.

The Zaparo from the Putumayo is from the collection of Osculati. It does not seem in any way related to the great stocks of the Amazonian region.

DIALECTS OF THE UPPER AMAZONIAN BASIN.—
(Continued.)

	<i>Tacana.</i>	<i>Maropa.</i>	<i>Sapibocona.</i>	<i>Araua.</i>
Man,	deja,	dreja,	reanci,	maquida.
Woman,	ano,	anu,	anu,	waidaua.
Sun,	ireti,	isjeti,		mahi.
Moon,	bari,	bantri,	bari,	massicu.
Fire,	quati,	cuati,	cuati,	sihu.
Water,	{ eave, jene,	} yuvi,	eubi,	paha.
Head,	echu,	echuja,	echuja.	
Eye,	etra drun dru,	eta chundru,	etua churu.	
Ear,	edaja,	eshacuena,		
Mouth,	equatri,	equatra,		
Nose,	evieni,	evi,	eyi.	
Tongue,	eana,	eana,	eana.	
Tooth,	etre,	etré,		
Hand,	ema,	eme,	eme,	usafa.
Foot,	equatri,	evatri,	ebbachí,	otama.
House,	ejtej,	etai,		zami.
1,	pea,	pembive,	carata,	warihi.
2,	beta,	beta,	mitia,	famihi.
3,	quimisha,	camisha,	curapa,	arishafaha.
4,	puchi,	puschi.		
5,	puchica,	pischica.		

The interesting group of the Tacana stock is illustrated above by three of its dialects. I regret that the recent publication on the Arauna by Rev. Nicolas Armentia (*Navegacion del Rio Madre de Dios*) has not been accessible to me.

The scanty vocabulary of the Araua does not permit any extended study of its relations.

I call attention to the numerals of the Sapibocona and Cayubaba as given above and on page 360. Prof. Fr. Müller has transposed the two in his lists of examples (*Sprachwissenschaft*, II., I., p. 438. Compare *Mithridates*, III., p. 576).

LANGUAGES OF THE BOLIVIAN HIGHLANDS.

	<i>Yurucare.</i>	<i>Itene.</i>	<i>Samucu.</i>	<i>Chiquito.</i>
Man,	suñe,	huatiki,	{ vairiguè, nani, H.,	{ ñoñich.
Woman,	yee,	tana,	{ yacotea, cheke, H.,	{ paich.
Sun,	puine,	mapito,	yede,	anene, zuuch.
Moon,	subi,	panevo,	etosia,	vaach, paas.
Fire,	aima,	iche,	pioc,	pee.
Water,	sama,	como,	yod,	tuuch.
Head,	dala,	mahui,	yatodo,	taanys.
Eye,	tanti, tauté,	to,	yedoy,	nosuto.
Ear,	meye,	iniri,	yagorone,	{ nonemasu. umapus.
Mouth,	pile,			ai.
Nose,	unte,		yacunachu,	iña.
Tongue,				otu.
Tooth,	sansa,			oo.
Hand,	bana,	uru,	ymanaetio,	{ panaucos. ees, H.
Foot,	te farafka,		irie,	pope.
House,	{ vive, techte, siba, }			poo.
1,	lecia, lecca,		chomara,	etama.
2,	lasie,		gar.	
3,	libi,		gaddioc.	
4,	lapsa.			
5,	cheti.			

The variety of stocks on the Bolivian highlands is clearly shown by the vocabularies on this and the following page. I have taken them from the D'Orbigny MSS., in the Bibliothèque Nationale, Paris, the collections of Hervas, and the papers of E. Heath in the *Kansas City Review*, 1883. I have not been able to connect any one of the eight tongues with any other, although each has some words which have been borrowed from others or from some common stock. Thus, the Yurucare *suñe*, man, Mosetena *zoñi*, Chiquito *ñoñich*, are too similar not to be from the same radical. It must be remembered that the Chiquito was adopted by the mis-

LANGUAGES OF THE BOLIVIAN HIGHLANDS.—
(Continued.)

	<i>Canichana.</i>	<i>Mosetena.</i>	<i>Cayubaba.</i>	<i>Mobima.</i>
Man,	{ hiochama, enacu, D., }	{ zoñi,	meyése,	iti-laqua.
Woman,	huiquigáue,	phen,	tenani,	{ cue'ya, cuç ya, H.
Sun,	ni-cojli,	tsuñ,	itoco,	{ tino. mossi. H.
Moon,	ni-milaue,	yvua,	irara,	yeche.
Fire,	ni-chuco,	tsi,	idore,	vűée.
Water,	nih-tji,	ozñi,	ikita,	to'mi.
Head,	ni-mucukh,	hutchi,	guana-quana,	ba-quáqua.
Eye,	eu-tokhe,	ve, <i>pl.</i> , vein,	en-chaco,	tsora.
Ear,	eu-comeh,	choñ,	ena-jengicui,	lototo.
Mouth,	eu-chene,	chóo,	en-diachi,	cuana.
Nose,	e-ejbé,	hey,	ena-hauvéo,	{ ba-chi. chini, H.
Tongue,	eu-tscháva,	nem,	ena-yi,	{ ruchlan. rulcua, H.
Tooth,	{ eu-huti, eu-cuti, D., }	{ monyin (<i>pl.</i>), }		söichlan.
Hand,	eu-tehli,	uñ,	en-dadra,	{ chopan. zoipok, H.
Foot,	eu-ajts,	yu,	en-arje,	risan.
House,	nit-cojl,	aca,		droya, asña.
1,	mereca,	zrit,	pebbi.	
2,	caadita,	pana,	bbeta.	
3,	caarjata,	chibbin,	kimisa.	
4,		tsis.		
5,		canam.		

sionaries as the general language for instruction, and other tribes were persuaded to learn it whenever possible. Thus some of its words came to be substituted for those originally familiar to the speakers.

The Chiquito and the Yurucare are the only tongues of the eight given of which I have found satisfactory grammatical notices; and that of the latter is still unpublished (see *anté*, p. 297).

LANGUAGES OF THE CHACO TRIBES.

	<i>Guaycuru.</i>	<i>Guaycuru.</i>	<i>Toba.</i>	<i>Payagua.</i>
Man,	conailaigo,	sellarnicke,	iale, yraic, D.,	pichires.
Woman,	ivuavo,	alucke,	aló,	elommi.
Sun,	ali juga,	nalacke,	la lá,	ijcabala.
Moon,	aipainahi,	auriucke,	karoic,	apajsa.
Fire,	noolai,	nodecke,	nodec, anorec, D.	
Water,	niogo,	extract,	netrat,	guayaque.
Head,		lacaicke,	lakaic, caracaic, D.,	yamagra.
Eye,	cogaicoguo,	laicté,	haité, yacte, D.,	yatiqui.
Ear,	conapajoti,	telá,	tela,	yaiguala.
Mouth,	coniola,		halap, ayap, D.	
Nose,	codeimie,	lunuke,	lomi, imic, D.,	iyocque.
Tongue,	codocaiti,		lacharat.	
Tooth,	codoai,	hué,	lué, yohua, D.	
Hand,	cobahaga,	yagata,	pokena,	inagchiac.
Foot,	codohoua,	lapiá,	lapiá, ypia, D.,	ybagro.
House,	dimi,	lumacké,	nollic, nnoic, D.,	yaggo.
1,			nathedac.	
2,			cacayni <i>or</i> nivoco.	
3,			cacaynilia.	
4,			nalotapegat.	
5,			nivoca-cacaynilia.	

The three dialects of the Guaycuru stock above given show considerable diversity. The first is from Castelnau, the second from Fontana, the third (Toba) from Carranza and de Angelis. The Payagua is also from Fontana (*Revista de la Soc. Geog. Argentina*, 1887, p. 352, sq.).

All the Chaco tribes are singularly defective in numeration. Pelleschi says that intelligent chiefs among them cannot count the fingers of one hand. Above the two numerals are generally compound words and have not fixed forms.

LANGUAGES OF THE CHACO TRIBES.—(*Continued.*)

	<i>Lule.</i>	<i>Vilela.</i>	<i>Chunupi.</i>	<i>Mataco.</i>
Man,	pelé,	nitemoi,	nitepac,	{ pairé. inoon, D.
Woman,	uacal,	quisle,	jiole,	chiegua.
Sun,	yny,	olò,	oló,	igualá.
Moon,	alit,	copi,	cocpi,	huela.
Fire,	ycuá,	niè,	nié,	etog.
Water,	to, fo,	ma,	maá,	{ elot. guag, D.
Head,	tocó,	niscone,	niscan,	litec, D.
Eye,	zu, chù,	toqué,	tacqui,	teloy.
Ear,	cusancp,	maslup,	mas leguep,	kiotei.
Mouth,	cá,	yep,		notagni, D.
Nose,	nùs,	limic,	niji veppe,	nognes.
Tongue,	lequy,	lequip.		
Tooth,	llu,	lupe.		
Hand,	ys,	isip,	ysivep,	nog-guez.
Foot,	ellú,	ape,	huopep,	kalay'.
House,	uyâ, enú,	guane,	huane,	{ guoslo. lubuque, D.
1,	* alapea,	agit,		{ hotequachi. efagla, D.
2,	tamop,	uke,		{ hotequoasi. tacuas, D.
3,	tamlip,	nipetuei,		{ lach tdi qua jel. tacuya, D.
4,	locuep,	yepkatalet,		{ tdi-qua less-hichi. nocuepogec, D.
5,				ype befagla, D.

The near relationship of the Lule, Vilela and Chunupi appears clear from the above comparison. The Chunupi words are taken from Fontana (*ubi supra*), the Vilela from the vocabulary of Gilii's *Storia Americana*, and the Lule from Machoni's Grammar.

The Mataco is also from Fontana, and represents the dialect as spoken to-day. The words marked D. are from the D'Orbigny MSS.

LANGUAGES OF THE LA PLATA BASIN AND PAMPAS.

	<i>Guachi.</i>	<i>Guato.</i>	<i>Caraja.</i>	<i>Araucanian.</i>
Man,	chacup,	matai,	abou,	che.
Woman,	outie',	mouhaja,	awkeu,	domo.
Sun,	ō-es,	nouveai,	tisu,	antu.
Moon,	o-alete,	upina,	aadou, endo,	cuyen.
Fire,		mata,	eastou,	cuthal.
Water,	euak,	maguen,	be-ai,	co.
Head,	iotapa,	dōkeu,	woara,	lonco.
Eye,	iataya,	marei,	waa-rouwai,	ge.
Ear,	irtanmété,	mavi,	wana-outai,	pilun.
Mouth,	iape,	dijio,	wa-a-rou,	uun.
Nose,	ia-note,	taga,	wa-day-asan,	yu.
Tongue,	iteche,	chagi,	wa-cla-rato,	que-uun.
Tooth,	iava,	maqua,	wa-a-djon,	voro.
Hand,	iolai-mason,	ida,	wa-debo,	cuu.
Foot,	iacalep,	apoo,	wa-a-wa,	namun.
House,	poecha,	mucu,	aeto,	ruca.
1,	tamak,	tchenai,	wadewo,	quiñe.
2,	eu-echo,	du-uni,	wadebo-thoa,	epu.
3,	eu-echo-kailau,	tchūm,	wadeboa-heodo,	cula.
4,	eu-echo-way.	dekai,	wadebo-jeodo,	meli.
5,	localau,	toera,	wadewa-jouclay,	quechu.

The vocabularies of the Guachis, Guatos and Carajas are from the collections of Castelnau (*Expedition*, Tome V., Appendix); that of the Araucanian from Febres' *Diccionario*.

The Guachis are classed as belonging to the Guaranis (Tupi stock), and by tradition came from the west (see *anté*, p. 233). A comparison with the Samucu vocabulary (page 359) seems to me to suggest several resemblances which would be worth further study on more extended material.

The Guatos may be a mixed offshoot of the Tapuya stock, as has been suggested (*anté*, p. 318). Of the Caraja, we must await the publication of the abundant material collected by Dr. Paul Ehrenreich.

PATAGONIAN AND FUEGIAN STOCKS.

	<i>Tsoneca, 1.</i>	<i>Tsoneca, 2.</i>	<i>Yahgan.</i>	<i>Alikuluf.</i>
Man,	nuken,	chonik,	ohă, uôn,	ack'inish.
Woman,	nacuna,	karken,	kepa, shepush,	ack'hanash.
Sun,	chuina,	gengenko,	lüm,	lüm.
Moon,	chuina,	showan,	han'nuka,	cuunequa.
Fire,	ma-ja,	yaik,	pushaky,	têtal.
Water,	karra,	ley,	shamea,	chanash.
Head,	guil,	kittar,	lukabe,	of'chocka.
Eye,	gottel,	g-ötl,	della,	telkh.
Ear,	shene,	shaa,	ufkhea,	teldil.
Mouth,		shahan,	yeak,	uffeare.
Nose,	oo,	tchal, or,	cushush,	nohl.
Tongue,	del,	tal,	lün,	luckin.
Teeth,	curr,	oër, orre,	tu'un,	cauwash.
Hand,	ore, fan,	tsicc'r,	{ jösch, marpo,	} yuccaba.
Foot,	keal,	{ shankence, alj,	} cöeeă,	cutliculcul.
Home,	cocha,	kou,	uk kral,	hüt.
1,	cheuquen,	chuche,	ocoale,	tow quid ow.
2,	xeukay,	houke,	combabe,	telkeow.
3,	keash,	{ aăs, kaash,	} mutta,	cup'eb.
4,	kekaguy,	{ carge, kague,	} carga,	inadaba.
5,	keytzum,	ktsin,	cup'aspa.	

The vocabularies of the Tsoneca, Tehuelhet or Patagonian differ considerably in the various writers. No. 1 is from Von Martius, completed from D'Orbigny's lists. No. 2 is based on Lt. Muster's examples, supplemented from the vocabularies in Ramon Lista's *Esploraciones*.

The Yahgan and Alikuluf pass for independent stocks. Yet in a number of words they resemble each other, and in a few, for example, those for "eye," "woman," "moon," "man," there seems more than a chance similarity.

ADDITIONS AND CORRECTIONS.

P. 24. AURIFEROUS GRAVELS OF CALIFORNIA. The principal reference is J. D. Whitney, *The Auriferous Gravels of the Sierra Nevada of California*, pp. 258-288 (Cambridge, Mass., 1879). Professor Whitney believes that the evidence is sufficient to attribute the mortars, pestles, beads, etc., found in the auriferous gravels to late pliocene man. But Dr. Joseph Leidy describes equine skulls, molars, incisors, etc., found in these gravels, thirty-five to forty feet below the surface, "not differing in any respect from those of the modern horse," and "unchanged in texture" (see *ibid.*, p. 257). Dr. Leidy informs me personally that for such reasons he gravely doubts the antiquity of the formation, and distrusts the great age of the human relics it contains.

P. 27. PALÆOLITHIC IMPLEMENTS. Reports of the discovery of very large numbers of supposed palæolithic implements in various parts of the United States have been collected and published by Mr. Thomas Wilson in the *Report of the U. S. National Museum*, 1887-88, pp. 677-702. These implements, however, are called palæolithic from their form and workmanship only, and not from the stratigraphic relations in which they were found. As palæolithic forms often survived in the ripper culture of the neolithic age, the only positive proof of their older origin must be that they are found in undisturbed relation to older strata.

P. 33. REMAINS OF MAN IN THE EQUUS BEDS. What American geologists call the Equus Beds are those which yield in abundance the bones of various species of fossil horse, as *E. major*, *occidentalis*, *excelsus*, *barcenæi*, *fraternus*, *crenicens*, etc., most of which have been determined by Dr. Joseph Leidy and Prof. E. D. Cope. The principal localities of these beds are: 1. The Oregon Desert; 2. The country of the Nueces, in southwestern Texas; and 3. The valley of Mexico. The horizon to which these beds should be referred was considered by Prof. King to be the Upper

Pliocene; but by Prof. G. K. Gilbert, Dr. Joseph Leidy, and I think, by Prof. Cope, it is rather held to be pleistocene or early quaternary, probably as old as the great glacial phenomena of the Continent. According to Cope and Gilbert, rude stone implements have undoubtedly been found *in place* in the *Equus* beds of Nevada, California and Southwestern Texas. See the *American Naturalist*, 1889, p. 165; *Proc. Acad. Nat. Sciences*, Phila., 1883, p. 134, sq.

Pp. 106, 108. KWAKIUTL AND NOOKTA STOCKS. After the pages referred to had been printed, I received, through the kindness of Mr. Horatio Hale, advance sheets of the Sixth Annual Report of the Committee of the British Association on the tribes of the Northwest Coast, prepared by Dr. Franz Boas, with an introduction by Mr. Hale, and including eighteen vocabularies. Dr. Boas' researches furnish clear evidence of a connection between the Kwakiutl and the Nootka tongues, and there is little doubt that they are distantly related. An instructive article on the physical characteristics of the Indians of the North Pacific coast is contributed by Dr. Boas to the *American Anthropologist* for January, 1891. His conclusion is: "Each tribe appears composed of many types, but in each we find a marked prevalence of a certain type"

P. 123. SUPPOSED CONNECTION OF SONORAN LANGUAGES WITH THE MAYA STOCK. In his *Etudes Aztèques*, published in the *Museon*, 1890, p. 506, M. W. Baligny endeavors to show a connection between the vocabularies of Sonoran languages and the Maya dialects. His strong points are some of the numerals and the personal pronouns of the first and second person. I have elsewhere given good reasons for not depending on these pronominal analogies in American languages (see *Essays of an Americanist*, p. 396). And as to the numerals, "dont la ressemblance est évidente" (according to him), when the Sonoran tongues disagree with the Nahuatl, they have almost always clearly borrowed from the Yuma stem, as in "two," *guoca*, *kuak* (see *Vocabs.*, *anté*, pp. 335, 336).

P. 163. LANGUAGE OF THE RAMAS. Since my negative observations about the Ramas were in type, I have received a short vocabulary of their language from the Rev. W. Siebärger, Moravian missionary on the Musquito coast. The orthography is German.

	<i>Rama.</i>		<i>Rama.</i>
Man,	nikikna,	Tongue,	kup.
Woman,	kuma,	Tooth,	siik.
Sun,	nunik,	Hand,	kuik.
Moon,	tukan,	Foot,	kaat.
Fire,	abung,	House,	knu.
Water,	sii,	1,	saiming.
Head,	kiing,	2,	puk sak.
Eye,	up,	3,	pang sak.
Ear,	kuka,	4,	kun kun beiso,
Mouth,	kaka,	5,	kwik astar.
Nose,	taik.		

My informant writes me that the Ramas are about 250 in number, and are all Christians and able to speak and write English, except a few very old persons. Their language will probably be extinct in a few years. They are confined to their island in Bluefields Lagoon. It is particularly interesting, therefore, to fix their affinities before the opportunity passes. From the above vocabulary I think there is little doubt but that they are a branch of the Changuina or Dorasque stock, described pp. 174, 175. The following words attest this, the Changuina forms being from A. L. Pinart's *Vocabulario Castellano-Dorasque, Dialectos Chumulu, Guailaca y Changuina* (Paris, 1890):

	<i>Rama.</i>	<i>Changuina.</i>
Sun,	nunik,	kēlik u.
Fire,	abung,	kebūg-al (fire-brand).
Water,	sii,	si.
Head,	kiing,	kin-unuma.
Ear,	kuka,	kuga.
Mouth,	kaka,	kaga.
Nose,	taik,	θakai.
Tongue,	kup,	kuba.
Tooth,	siik,	su.
Hand,	kuik,	kula.
House,	knu,	ku.

The numerals for "two" and "three," *puk sak*, *pang sak*, are doubtless the Cuna *pocua*, *pagua*. The Ramas, therefore, belong to the Isthmian tribes, and formed the vanguard of the South

American immigration into North America. What time they moved northward and possessed themselves of their small island is unknown, but it was probably after the the conquest. Mr. Siebärger writes me: "They were always kept under, even ill-treated, by the Mnsquito Indians, and are still very submissive and teachable."

The following errata should be noted :

P. 69, line 3 ; for *Nehaunies* read *Nahaunies*.

• Pp. 89, 95, 98 and 101, the numbers of the sections should read 7, 8, 9, 10, instead of 5, 6, 7, 8.

P. 169, line 17, for *maternal* read *paternal*.

P. 197, for *Morropas* read *Malabas*.

P. 251, line 11, for *Wapiana* read *Woyawoi*.

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